

[illegible]

TABLE No. XXVIII.
Causes of Deaths of Mahomedans in the Town of Calcutta at different periods of life in the year 1882.

CAUSES OF DEATH.	AGES AT DEATH.											Total under five years.	4-	3-	2-	1-	Total under one year.	All ages.
	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85 years and upwards.							
ZYMOTIC DISEASES.																		
ORDER 1.																		
1. Small-pox	5	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2. Measles	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3. Scarlet fever	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4. Diphtheria	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5. Quinsey	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6. Whooping cough	18	16	14	11	9	8	7	6	5	4	3	2	1	1	1	1	1	1
7. Typhoid fever	5	1	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8. Enteric or typhoid fever	2	10	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
9. Simple continued fever	44	37	23	27	10	16	13	15	27	2	0	4	8	1	1	1	1	1
10. Erysipelas	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
11. Puerperal fever (metria)	113	88	6	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
12. Carbuncle	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
13. Influenza	349	103	13	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
14. Dysentery	8	13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
15. Diarrhoea	186	78	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16. Cholera	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
17. Remittent fever	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
18. Rheumatism																		
19. Other zymotic diseases																		
ORDER 2.																		
1. Syphilis	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2. Stricture of urethra																		
3. Hydrophobia																		
4. Glanders																		
ORDER 3.																		
1. Privation	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2. Want of breast milk																		
3. Purpura and scarlatina																		
4. Alcoholism																		
{ (6) Poltrian tremors																		
{ (6) Intemperance																		
ORDER 4.																		
1. Thrush																		
2. Worms																		

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TABLE No. XXVIII—continued.

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CONSTITUTIONAL.

ORDER 1.

- | | | |
|----|----------------------|-----|
| 1. | Gout | ... |
| 2. | Dropsy | ... |
| 3. | Cancer | ... |
| 4. | Cancerum oris (noma) | ... |
| 5. | Mutilation | ... |

ORDER 2.

1. Scrofula
2. Tabes mesenterica
3. Phthisis
4. Hydrocephalus

LOCAL DISEASES.

Order 1.

1. Cephalitis
2. Apoplexy
3. Paralysis
4. Insanity
5. Chorea
6. Epilepsy
7. Convulsions
8. Brain disease
9. Tetanus

ORDER 2.

1. Pericarditis
2. Aneurysm
3. Heart disease

Order 2.

1. Laryngitis
2. Bronchitis
3. Pleurisy
4. Pneumonia
5. Asthma
6. Lung disease

ORDER 4

- | | 1940 | 1941 | 1942 |
|-----------------------------|------|------|------|
| 1. Gastritis | 400 | 362 | 362 |
| 2. Enteritis | 100 | 100 | 100 |
| 3. Peritonitis | 100 | 100 | 100 |
| 4. Ascites | 100 | 100 | 100 |
| 5. Ulceration of intestines | 100 | 100 | 100 |
| 6. Hernia | 100 | 100 | 100 |
| 7. Hous | 100 | 100 | 100 |
| 8. Intussusception | 100 | 100 | 100 |
| 9. Stricture of intestine | 100 | 100 | 100 |

TABLE No. XXIX—continued.

[illegible]

Statement of Mortality in 1882 from every Cause among all Races and Ages.

CAUSES OF DEATHS.	AGES AT DEATHS.																	
	All ages.	Total under 1 year.	1—	2—	3—	4—	Total under 5 years.	5—	10—	15—	20—	25—	35—	45—	55—	65—	75—	85 years and upward.
ZYNOTIC DISEASES.																		
ORDER 1.																		
1. Small-pox	16	7	1	1	1	1	1	1	2	3	3	2	2	1	1	1	1	1
2. Measles	8	4	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1
3. Scarlet fever	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4. Diphtheria	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5. Quinsy	63	46	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6. Group	25	27	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
7. Whooping cough	5	11	10	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
8. { Typhus fever Enteric or typhoid fever	185	40	16	14	14	14	14	14	36	31	31	31	146	80	120	64	111	87
9. Simple continued fever	1,401	820	67	67	67	67	67	67	1	1	1	2	1	1	1	1	1	1
10. Erysipelas	4	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11. Puerperal fever (metritis)	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12. Carbuncle	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13. Indurated	404	388	31	31	31	31	31	31	8	13	13	19	93	40	66	34	52	29
14. Dysentery	283	248	15	15	15	15	15	15	5	5	5	18	37	37	40	37	31	47
15. Cholera	1,597	643	21	21	21	21	21	21	20	78	55	52	437	86	235	75	117	64
16. Arsenic	84	31	5	5	5	5	5	5	1	1	1	6	7	6	7	4	3	6
17. Rheumatic fever	987	494	5	5	5	5	5	5	6	24	22	40	194	76	163	65	106	71
18. Rheumatism	8	13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
19. Other zymotic diseases	40	15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ORDER 2.																		
1. Syphilis	8	9	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1
2. Stricture of urethra	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3. Hydrophobia	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4. Glanders	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ORDER 3.																		
1. Privation	7	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2. Want of breast milk	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3. Purpura and scurvy	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4. Alcoholism { (a) Delirium tremens (b) — Intemperance																		
ORDER 4.																		
1. Thrush																		

TABLE No. XXX—continued.

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ORDER 2.		ORDER 3.		ORDER 4.		ORDER 5.		ORDER 6.		ORDER 7.		ORDER 8.		ORDER 9.		ORDER 10.		ORDER 11.		ORDER 12.		ORDER 13.		ORDER 14.		ORDER 15.		ORDER 16.		ORDER 17.		ORDER 18.		ORDER 19.		ORDER 20.		ORDER 21.		ORDER 22.		ORDER 23.		ORDER 24.		ORDER 25.		ORDER 26.		ORDER 27.		ORDER 28.		ORDER 29.		ORDER 30.		ORDER 31.		ORDER 32.		ORDER 33.		ORDER 34.		ORDER 35.		ORDER 36.		ORDER 37.		ORDER 38.		ORDER 39.		ORDER 40.		ORDER 41.		ORDER 42.		ORDER 43.		ORDER 44.		ORDER 45.		ORDER 46.		ORDER 47.		ORDER 48.		ORDER 49.		ORDER 50.		ORDER 51.		ORDER 52.		ORDER 53.		ORDER 54.		ORDER 55.		ORDER 56.		ORDER 57.		ORDER 58.		ORDER 59.		ORDER 60.		ORDER 61.		ORDER 62.		ORDER 63.		ORDER 64.		ORDER 65.		ORDER 66.		ORDER 67.		ORDER 68.		ORDER 69.		ORDER 70.		ORDER 71.		ORDER 72.		ORDER 73.		ORDER 74.		ORDER 75.		ORDER 76.		ORDER 77.		ORDER 78.		ORDER 79.		ORDER 80.		ORDER 81.		ORDER 82.		ORDER 83.		ORDER 84.		ORDER 85.		ORDER 86.		ORDER 87.		ORDER 88.		ORDER 89.		ORDER 90.		ORDER 91.		ORDER 92.		ORDER 93.		ORDER 94.		ORDER 95.		ORDER 96.		ORDER 97.		ORDER 98.		ORDER 99.		ORDER 100.		ORDER 101.		ORDER 102.		ORDER 103.		ORDER 104.		ORDER 105.		ORDER 106.		ORDER 107.		ORDER 108.		ORDER 109.		ORDER 110.		ORDER 111.		ORDER 112.		ORDER 113.		ORDER 114.		ORDER 115.		ORDER 116.		ORDER 117.		ORDER 118.		ORDER 119.		ORDER 120.		ORDER 121.		ORDER 122.		ORDER 123.		ORDER 124.		ORDER 125.		ORDER 126.		ORDER 127.		ORDER 128.		ORDER 129.		ORDER 130.		ORDER 131.		ORDER 132.		ORDER 133.		ORDER 134.		ORDER 135.		ORDER 136.		ORDER 137.		ORDER 138.		ORDER 139.		ORDER 140.		ORDER 141.		ORDER 142.		ORDER 143.		ORDER 144.		ORDER 145.		ORDER 146.		ORDER 147.		ORDER 148.		ORDER 149.		ORDER 150.		ORDER 151.		ORDER 152.		ORDER 153.		ORDER 154.		ORDER 155.		ORDER 156.		ORDER 157.		ORDER 158.		ORDER 159.		ORDER 160.		ORDER 161.		ORDER 162.		ORDER 163.		ORDER 164.		ORDER 165.		ORDER 166.		ORDER 167.		ORDER 168.		ORDER 169.		ORDER 170.		ORDER 171.		ORDER 172.		ORDER 173.		ORDER 174.		ORDER 175.		ORDER 176.		ORDER 177.		ORDER 178.		ORDER 179.		ORDER 180.		ORDER 181.		ORDER 182.		ORDER 183.		ORDER 184.		ORDER 185.		ORDER 186.		ORDER 187.		ORDER 188.		ORDER 189.		ORDER 190.		ORDER 191.		ORDER 192.		ORDER 193.		ORDER 194.		ORDER 195.		ORDER 196.		ORDER 197.		ORDER 198.		ORDER 199.		ORDER 200.		ORDER 201.		ORDER 202.		ORDER 203.		ORDER 204.		ORDER 205.		ORDER 206.		ORDER 207.		ORDER 208.		ORDER 209.		ORDER 210.		ORDER 211.		ORDER 212.		ORDER 213.		ORDER 214.		ORDER 215.		ORDER 216.		ORDER 217.		ORDER 218.		ORDER 219.		ORDER 220.		ORDER 221.		ORDER 222.		ORDER 223.		ORDER 224.		ORDER 225.		ORDER 226.		ORDER 227.		ORDER 228.		ORDER 229.		ORDER 230.		ORDER 231.		ORDER 232.		ORDER 233.		ORDER 234.		ORDER 235.		ORDER 236.		ORDER 237.		ORDER 238.		ORDER 239.		ORDER 240.		ORDER 241.		ORDER 242.		ORDER 243.		ORDER 244.		ORDER 245.		ORDER 246.		ORDER 247.		ORDER 248.		ORDER 249.		ORDER 250.		ORDER 251.		ORDER 252.		ORDER 253.		ORDER 254.		ORDER 255.		ORDER 256.		ORDER 257.		ORDER 258.		ORDER 259.		ORDER 260.		ORDER 261.		ORDER 262.		ORDER 263.		ORDER 264.		ORDER 265.		ORDER 266.		ORDER 267.		ORDER 268.		ORDER 269.		ORDER 270.		ORDER 271.		ORDER 272.		ORDER 273.		ORDER 274.		ORDER 275.		ORDER 276.		ORDER 277.		ORDER 278.		ORDER 279.		ORDER 280.		ORDER 281.		ORDER 282.		ORDER 283.		ORDER 284.		ORDER 285.		ORDER 286.		ORDER 287.		ORDER 288.		ORDER 289.		ORDER 290.		ORDER 291.		ORDER 292.		ORDER 293.		ORDER 294.		ORDER 295.		ORDER 296.		ORDER 297.		ORDER 298.		ORDER 299.		ORDER 300.	
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A

TABLE No. XXXI.
Causes of Deaths of Non-Asiatics in the Town of Calcutta at different periods of life during the first quarter of 1883.

[illegible]

CONSTITUTIONAL.									
ORDER 1.									
1. Gout	...	...	...	...	...	...	...	...	...
2. Dropsy	...	...	...	...	...	...	...	...	...
3. Cancer	...	...	...	...	...	...	...	...	...
4. Carcinoma	...	...	...	...	...	...	...	...	...
5. Erysipelas	...	...	...	...	...	...	...	...	...
ORDER 2.									
1. Scrofula	...	...	...	...	...	...	...	...	...
2. Tubercles	...	...	...	...	...	...	...	...	...
3. Pityriasis	...	...	...	...	...	...	...	...	...
4. Hydrocephalus	...	...	...	...	...	...	...	...	...
LOCAL DISEASES.									
ORDER 1.									
1. Cephalitis	...	...	...	...	...	...	...	...	...
2. Asphyxia	...	...	...	...	...	...	...	...	...
3. Paralysis	...	...	...	...	...	...	...	...	...
4. Insanity	...	...	...	...	...	...	...	...	...
5. Chorea	...	...	...	...	...	...	...	...	...
6. Epilepsy	...	...	...	...	...	...	...	...	...
7. Convulsions	...	...	...	...	...	...	...	...	...
8. Brain disease	...	...	...	...	...	...	...	...	...
9. Tetanus	...	...	...	...	...	...	...	...	...
ORDER 2.									
1. Pericarditis	...	...	...	...	...	...	...	...	...
2. Anasarca	...	...	...	...	...	...	...	...	...
3. Heart disease	...	...	...	...	...	...	...	...	...
ORDER 3.									
1. Laryngitis	...	...	...	...	...	...	...	...	...
2. Bronchitis	...	...	...	...	...	...	...	...	...
3. Pleurisy	...	...	...	...	...	...	...	...	...
4. Pneumonia	...	...	...	...	...	...	...	...	...
5. Asthma	...	...	...	...	...	...	...	...	...
6. Lung disease	...	...	...	...	...	...	...	...	...
ORDER 4.									
1. Gastritis	...	...	...	...	...	...	...	...	...
2. Enteritis	...	...	...	...	...	...	...	...	...
3. Peritonitis	...	...	...	...	...	...	...	...	...
4. Ascites	...	...	...	...	...	...	...	...	...
5. Ulceration of intestines	...	...	...	...	...	...	...	...	...
6. Hernia	...	...	...	...	...	...	...	...	...
7. Hæmorrhoids	...	...	...	...	...	...	...	...	...
8. Intussusception	...	...	...	...	...	...	...	...	...
9. Stricture of intestines	...	...	...	...	...	...	...	...	...
10. Fistula	...	...	...	...	...	...	...	...	...
11. Stomach disease	...	...	...	...	...	...	...	...	...
12. Pancreas disease	...	...	...	...	...	...	...	...	...
13. Hæmaturia	...	...	...	...	...	...	...	...	...
14. Jaundice	...	...	...	...	...	...	...	...	...
15. Liver disease	...	...	...	...	...	...	...	...	...
16. Spleen disease	...	...	...	...	...	...	...	...	...
17. Cholelith	...	...	...	...	...	...	...	...	...
18. Constipation	...	...	...	...	...	...	...	...	...
19. Obstruction of bowels	...	...	...	...	...	...	...	...	...

Causes of Deaths of Mixed Races in the Town of Calcutta at different periods of life during the first quarter of 1882-83.

CAUSES OF DEATHS.		AGES AT DEATHS.																				
		All ages.	Total under one year.		1--	2--	3--	4--	Total under five years.		5--	10--	15--	20--	25--	35--	45--	55--	65--	75--	85 years and upward.	
ZYMOTIC DISEASES.																						
ORDER 1.																						
1. Small-pox	...	1	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
2. Measles	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
3. Scarlet fever	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
4. Diphtheria	...	1	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
5. Quinsy	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
6. Croup	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
7. Whooping cough	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
8. Typhus fever	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
9. Erysipelas	...	1	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
10. Simple continued fever	...	3	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
11. Puerperal fever (metris)	...	1	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
12. Gonorrhoea	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
13. Influenza	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
14. Dysentery	...	1	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
15. Diarrhoea	...	5	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
16. Cholera	...	8	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
17. Acute	...	2	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
18. Remittent fever	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
19. Rheumatism	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
20. Other zymotic diseases	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
ORDER 2.																						
1. Syphilis	...	1	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
2. Stricture of urethra	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
3. Hydrophobia	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
4. Glanders	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
ORDER 3.																						
1. Privation	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
2. Want of breast milk	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
3. Purpura and scurvy	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
4. Alcoholism	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
ORDER 4.																						
1. Thrush	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P
2. Worms	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M	P

II CONSTITUTIONAL.

ORDER 1.

1. Gout
2. Dropsy
3. Cancer
4. Cancerous oris (noma)
5. Mortification

ORDER 2.

1. Scrofula
2. Tubercles mesenterics
3. Phthisis
4. Hydrocephalus

III LOCAL DISEASES.

ORDER 1.

1. Cephalitis
2. Epilepsy
3. Paralysis
4. Insanity
5. Cholera
6. Epistaxis
7. Oculitis
8. Brain disease
9. Tetanus

ORDER 2.

1. Pericarditis
2. Aneurism
3. Heart disease

ORDER 3.

1. Laryngitis
2. Hemoptysis
3. Pleurisy
4. Pneumonia
5. Asthma
6. Lung disease

ORDER 4.

1. Gastritis
2. Enteritis
3. Peritonitis
4. Ascites
5. Ulceration of intestines
6. Hernia
7. Ileus
8. Intussusception
9. Stricture of intestines
10. Fistula
11. Stomach disease
12. Pancreas disease
13. Hepatitis
14. Jaundice
15. Liver disease
16. Spleen disease
17. Colic
18. Constipation of bowels
19. Obstruction of bowels

TABLE No. XXVII—continued.

[illegible]

[illegible]

Causes of Deaths of Hindus in the Town of Calcutta at different periods of life during the first quarter of 1883.

[illegible]

II CONSTITUTIONAL

ORDER 1.

1. Gout
2. Dropsy
3. Cancer
4. Cancerous (scrofula)
5. Morbidity

ORDER 2.

1. Scrofula
2. Tuberous scrofula
3. Phthisis
4. Hydrocephalus

III LOCAL DISEASES.

ORDER 1.

1. Cephalitis
2. Apoplexy
3. Paralysis
4. Insanity
5. Chorea
6. Epilepsy
7. Convulsions
8. Brain disease
9. Tetanus
10. Hysteria

ORDER 2.

1. Pericarditis
2. Anasarca
3. Heart disease

ORDER 3.

1. Laryngitis
2. Bronchitis
3. Pleurisy
4. Pneumonia
5. Asthma
6. Lung disease

ORDER 4.

1. Gastritis
2. Enteritis
3. Peritonitis
4. Ascitis
5. Inflammation of intestines
6. Typhus
7. Intussusception
8. Stricture of intestines
9. Pseudo
10. Stomach disease
11. Pancreas disease
12. Gallitis
13. Jaundice
14. Liver disease
15. Spleen disease

TABLE No. XXXIII—continued.

[illegible]

ORDER 2.		ORDER 3.		ORDER 4.		ORDER 5.		ORDER 6.		ORDER 7.		ORDER 8.		ORDER 9.		ORDER 10.		ORDER 11.		ORDER 12.		ORDER 13.		ORDER 14.		ORDER 15.		ORDER 16.		ORDER 17.		ORDER 18.		ORDER 19.		ORDER 20.		ORDER 21.		ORDER 22.		ORDER 23.		ORDER 24.		ORDER 25.		ORDER 26.		ORDER 27.		ORDER 28.		ORDER 29.		ORDER 30.		ORDER 31.		ORDER 32.		ORDER 33.		ORDER 34.		ORDER 35.		ORDER 36.		ORDER 37.		ORDER 38.		ORDER 39.		ORDER 40.		ORDER 41.		ORDER 42.		ORDER 43.		ORDER 44.		ORDER 45.		ORDER 46.		ORDER 47.		ORDER 48.		ORDER 49.		ORDER 50.		ORDER 51.		ORDER 52.		ORDER 53.		ORDER 54.		ORDER 55.		ORDER 56.		ORDER 57.		ORDER 58.		ORDER 59.		ORDER 60.		ORDER 61.		ORDER 62.		ORDER 63.		ORDER 64.		ORDER 65.		ORDER 66.		ORDER 67.		ORDER 68.		ORDER 69.		ORDER 70.		ORDER 71.		ORDER 72.		ORDER 73.		ORDER 74.		ORDER 75.		ORDER 76.		ORDER 77.		ORDER 78.		ORDER 79.		ORDER 80.		ORDER 81.		ORDER 82.		ORDER 83.		ORDER 84.		ORDER 85.		ORDER 86.		ORDER 87.		ORDER 88.		ORDER 89.		ORDER 90.		ORDER 91.		ORDER 92.		ORDER 93.		ORDER 94.		ORDER 95.		ORDER 96.		ORDER 97.		ORDER 98.		ORDER 99.		ORDER 100.		ORDER 101.		ORDER 102.		ORDER 103.		ORDER 104.		ORDER 105.		ORDER 106.		ORDER 107.		ORDER 108.		ORDER 109.		ORDER 110.		ORDER 111.		ORDER 112.		ORDER 113.		ORDER 114.		ORDER 115.		ORDER 116.		ORDER 117.		ORDER 118.		ORDER 119.		ORDER 120.		ORDER 121.		ORDER 122.		ORDER 123.		ORDER 124.		ORDER 125.		ORDER 126.		ORDER 127.		ORDER 128.		ORDER 129.		ORDER 130.		ORDER 131.		ORDER 132.		ORDER 133.		ORDER 134.		ORDER 135.		ORDER 136.		ORDER 137.		ORDER 138.		ORDER 139.		ORDER 140.		ORDER 141.		ORDER 142.		ORDER 143.		ORDER 144.		ORDER 145.		ORDER 146.		ORDER 147.		ORDER 148.		ORDER 149.		ORDER 150.		ORDER 151.		ORDER 152.		ORDER 153.		ORDER 154.		ORDER 155.		ORDER 156.		ORDER 157.		ORDER 158.		ORDER 159.		ORDER 160.		ORDER 161.		ORDER 162.		ORDER 163.		ORDER 164.		ORDER 165.		ORDER 166.		ORDER 167.		ORDER 168.		ORDER 169.		ORDER 170.		ORDER 171.		ORDER 172.		ORDER 173.		ORDER 174.		ORDER 175.		ORDER 176.		ORDER 177.		ORDER 178.		ORDER 179.		ORDER 180.		ORDER 181.		ORDER 182.		ORDER 183.		ORDER 184.		ORDER 185.		ORDER 186.		ORDER 187.		ORDER 188.		ORDER 189.		ORDER 190.		ORDER 191.		ORDER 192.		ORDER 193.		ORDER 194.		ORDER 195.		ORDER 196.		ORDER 197.		ORDER 198.		ORDER 199.		ORDER 200.		ORDER 201.		ORDER 202.		ORDER 203.		ORDER 204.		ORDER 205.		ORDER 206.		ORDER 207.		ORDER 208.		ORDER 209.		ORDER 210.		ORDER 211.		ORDER 212.		ORDER 213.		ORDER 214.		ORDER 215.		ORDER 216.		ORDER 217.		ORDER 218.		ORDER 219.		ORDER 220.		ORDER 221.		ORDER 222.		ORDER 223.		ORDER 224.		ORDER 225.		ORDER 226.		ORDER 227.		ORDER 228.		ORDER 229.		ORDER 230.		ORDER 231.		ORDER 232.		ORDER 233.		ORDER 234.		ORDER 235.		ORDER 236.		ORDER 237.		ORDER 238.		ORDER 239.		ORDER 240.		ORDER 241.		ORDER 242.		ORDER 243.		ORDER 244.		ORDER 245.		ORDER 246.		ORDER 247.		ORDER 248.		ORDER 249.		ORDER 250.		ORDER 251.		ORDER 252.		ORDER 253.		ORDER 254.		ORDER 255.		ORDER 256.		ORDER 257.		ORDER 258.		ORDER 259.		ORDER 260.		ORDER 261.		ORDER 262.		ORDER 263.		ORDER 264.		ORDER 265.		ORDER 266.		ORDER 267.		ORDER 268.		ORDER 269.		ORDER 270.		ORDER 271.		ORDER 272.		ORDER 273.		ORDER 274.		ORDER 275.		ORDER 276.		ORDER 277.		ORDER 278.		ORDER 279.		ORDER 280.		ORDER 281.		ORDER 282.		ORDER 283.		ORDER 284.		ORDER 285.		ORDER 286.		ORDER 287.		ORDER 288.		ORDER 289.		ORDER 290.		ORDER 291.		ORDER 292.		ORDER 293.		ORDER 294.		ORDER 295.		ORDER 296.		ORDER 297.		ORDER 298.		ORDER 299.		ORDER 300.	
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Causes of Deaths of Mahomedans in the Town of Calcutta at different periods of life during the first quarter of 1883.

CAUSES OF DEATH.		AGED AT DEATHS.																		
Class.	All ages.	Total under one year.	1—	2—	3—	4—	Total under five years.	5—	10—	15—	20—	25—	35—	40—	45—	55—	65—	75—	85 years and upwards.	
		P.	M.	P.	M.	P.	M.	P.	M.	P.	M.	P.	M.	P.	M.	P.	M.	P.	M.	P.
SYNCHOTIC DISEASES.																				
ORDER 1.																				
1. Small-pox	12	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2. Measles	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3. Scarlet fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Diphtheria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. Quinsy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. Whooping cough	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7. Typhus fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8. Enteric or typhoid fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9. Simple continued fever	150	104	16	7	3	5	8	3	2	1	1	1	1	1	1	1	1	1	1	1
10. Erysipelas	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11. Purpura fever (metria)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12. Carbuncle	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13. Influenza	41	13	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14. Dysentery	7	11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15. Diarrhoea	104	40	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16. Cholera	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17. Ague	22	14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18. Rheumatism	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19. Rheumatoid fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20. Other synchotic diseases	13	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ORDER 2.																				
1. Syphilis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Stricture of urethra	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Hypophobla	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Glanders	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ORDER 3.																				
1. Privation	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Want of breast milk	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Purpura and scurvy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Alcoholism	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
{(a) Delirium tremens (b) Intemperance																				
ORDER 4.																				
1. Turned Worms	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE NO. XXXIV—continued.

[illegible]

[illegible]

Causes of Deaths of Other Classes in the Town of Calcutta at different periods of life during the first quarter of 1883.

[illegible]

CONSTITUTIONAL.

ORDER 1.

1. Gout
2. Dropsy
3. Cancer
4. Carcinoma (poma)
5. Carcinoma
6. Morbidity

ORDER 2.

1. Scrofula
2. Tubercles
3. Phthisis
4. Hydrocephalus

LOCAL DISEASES.

ORDER 1.

1. Cephalitis
2. Apoplexy
3. Paralysis
4. Insanity
5. Chorea
6. Epilepsy
7. Convulsions
8. Brain disease
9. Tetanus

ORDER 2.

1. Pericarditis
2. Aneurysm
3. Heart disease

ORDER 3.

1. Laryngitis
2. Bronchitis
3. Pharyngitis
4. Tracheitis
5. Asthma
6. Lung disease

ORDER 4.

1. Gastritis
2. Enteritis
3. Peritonitis
4. Ascites
5. Inflammation of intestines
6. Hernia
7. Ileus
8. Intussusception
9. Stricture of intestines
10. Yaws
11. Syphilis
12. Scrophulous disease
13. Haemorrhoids
14. Jaundice
15. Liver disease

TABLE XXXV—continued.

CAUSES OF DEATHS.		AGES AT DEATHS.																			
Class.	All ages.	Total under one year.	1-2		3-	4-	Total under five years.	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85 years and upwards.			
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
VIII	LOCAL DISEASE—concluded.																				
	ORDER 4—concluded.																				
	16.	Spleen disease ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	17.	Colic ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	18.	Constipation ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	19.	Obstruction of bowels ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	ORDER 5.																				
	1.	Nephritis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	2.	Ischuria ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	3.	Bright's disease ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
IV	DEVELOPMENTAL DISEASES.																				
	ORDER 6.																				
	1.	Ovarian dropsy ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	2.	Uterus disease ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	ORDER 7.																				
	1.	Gonorrhea (arthritis) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	2.	Joint disease ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	ORDER 8.																				
	1.	Phlegmon ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	2.	Ulcer ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3.	Skin disease ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
ORDER 1.																					
1.	Premature birth ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2.	Cyanosis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3.	Spina bifida ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4.	Other malformations ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5.	Teething ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6.	Still-born ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

[illegible]

APPENDIX.

HEALTH OFFICER'S DEPARTMENT.

Report on the working of the Establishment for the quarter ending 31st March 1883.

THE following cases were enquired into, the respective localities inspected by the officers of the department, reports furnished, and the cases finally disposed of:—

- | | |
|---|--|
| 53 Complaints. | 17 Applications rejected for offensive and dangerous trades. |
| 19 Registry certificates granted for dispensaries and drug shops. | 171 Applications attended to. |
| 7 Registry certificates granted for offensive and dangerous trades. | 412 Applications for vaccination attended to. |
| | 163 Miscellaneous cases disposed of. |

Confiscations consisted of the following:—

Tea	...	8,680 lb.	Dal	...	60 mds.
Rice	...	2,291 mds.	Vermicelli	...	700 lb.

TABLE No. XXXVI.

Comparative Statement of Cattle slaughtered at the Municipal Slaughter-houses at Tengra during the 1st quarter of 1882-83.

	1882.				1883.			
	Jan.	Feb.	Mar.	Total.	Jan.	Feb.	Mar.	Total.
1st class bullocks	1,637	1,264	1,115	4,016	1,342	1,207	1,109	3,658
2nd " "	5,767	5,358	5,958	17,083	6,905	5,834	6,034	18,773
Calves	1,427	1,298	1,288	4,013	1,830	1,577	1,598	5,005
Sheep	5,369	4,875	5,317	15,561	6,228	5,089	5,804	17,121
Goats	3,355	2,667	2,779	8,801	2,705	2,851	2,402	7,958
Kids	1,797	1,625	1,557	5,279	1,187	1,049	1,288	3,524
Total	19,372	17,087	18,314	54,773	20,197	17,587	18,230	56,014

TABLE No. XXXVII.

Comparative Statement of Collections made during the 1st quarter of 1882-83.

	1882.				1883.			
	Jan.	Feb.	Mar.	Total.	Jan.	Feb.	Mar.	Total.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Slaughter-houses	3,595 5 3	3,047 6 6	3,228 12 9	9,871 8 6	3,864 8 3	3,203 13 6	3,273 7 6	10,341 13 3
Fees for vaccination	50 12 0	147 8 0	125 0 0	323 4 0	29 12 0	36 0 0	131 4 0	200 0 0
Miscellaneous	6 0 0	7 0 0	7 0 0	20 0 0	15 0 0	4 0 0	6 0 0	25 0 0
Rent of public batties	.....	.....	.....	.....	19 14 6	26 5 0	5 0 0	51 3 6
License of ditto	.....	.....	.....	.....	.....	214 12 0	111 4 0	326 0 0
Sale of standard plan for privies	.....	.....	.....	.....	27 0 0	28 0 0	28 8 0	83 8 0
Refund of salaries	.....	.....	.....	.....	20 13 6	6 13 9	.....	27 11 3
Total	3,652 1 3	3,201 14 6	3,360 12 9	10,214 12 6	3,977 0 8	3,519 12 3	3,566 7 6	11,063 4 0

TABLE No. XXXVIII.

Markets.—The prices of the principal articles of consumption have ranged as follows:—

Mutton in carcass, per lb.		Beef in carcass, per lb.		Rice, per seer.		Dal, per seer.	Ghee, per seer.	Oil, per seer.	Fuel, per maund.	
First class.	Second class.	First class.	Second class.	Table.	Ballam.	Average six kinds.	Best.	Mustard.	Firewood.	Charcoal.
5 annas.	2 annas 6 pie.	1 anna 9 pie to 2 annas.	1 anna to 1 anna 3 pie.	1 anna 6 pie to 2 annas 6 pie.	9 pie to 1 anna.	1 anna 6 pie.	12 annas to 15 annas.	5 annas to 6 annas 6 pie.	7 annas to 8 annas.	1 rupee 4 annas to 2 rupees 4 annas.

NUISANCE DEPARTMENT.

The following statement shows the number of privies attended to by the municipal mehters:—

Number in list on 31st December 1882	...	...	38,227
Ditto undertaken during the quarter	...	...	322
			38,549
Less number in which services were discontinued	...	...	117
Total number now served	...	...	38,432
Total for the corresponding quarter of 1882	...	...	38,165

Sanction was accorded for building 36 pucca privies in private dwelling houses and 758 privies in bustees. Every bustee privy was sanctioned on the standard plan, special care being taken to insure the provision of means of draining the privy and its surroundings. The connection of three privies with the sewers has been recommended, subject to the approval of the Engineer. Receptacles for washings allowed to 216 privies.

The following statement shows the notices that were issued under different sections of the Act, and the action taken thereon:—

SUBSTANCE OF SECTION.	NOTICES.			Number complied with.	Number of cases in which action was taken by the department.	Number of cases transferred to Engineer's Department for action.	Parties absconded.	Number of cases pending with the overseers.
	Number pending on the 31st December 1882.	Number issued during the quarter.	Total.					
238 For alteration of privies	419	1,109	1,528	191	810	37	1	489
240 " cleaning filthy land	1	1	2	1	.....	.....	.....	1
245 " neglecting to enclose private privies	9	7	16	8	.....	.....	.....	8
Total	429	1,117	1,546	200	810	37	1	498

The following statement shows the prosecutions instituted during the quarter:—

SUBSTANCE OF SECTION.	SUMMONS.			Number of cases warned and discharged.	Parties absconded.	Number of cases in which fines were imposed.	Amount of fines.	Number of cases pending.
	Number of cases pending on the 31st December 1882.	Number issued during the quarter.	Total.					
238 For keeping filthy land	5	347	352	66	44	207	Rs. A. P.	35
280 " constructing privies without sanction	6	15	21	15	2	3	11 0 0	1
197 " flowing sewage	.....	2	2	1	.....	1	2 0 0	.....
239 " throwing or permitting to be thrown night-soil into filled up drain	.....	2	2	.....	1	1	1 0 0	.....
Total	11	366	377	82	47	212	216 8 0	36

Two thousand six-hundred and forty-eight applications of various kinds were received and attended to; 942 letters written to.

Statement showing the number of prosecutions under Section 26 of Act V (B.C.) of 1880.

PROSECUTION.					RESULT.	
					January.	February.
					March.	Total.
						Number of cases vaccinated.
D. Sukoa's street	...	...	...	...	2	2
G. Burrabazar	...	...	...	...	2	2
H. Colicottollah	...	...	...	...	1	1
L. Moolheeparah	...	...	...	...	3	3
Total	...	...	...	...	8	8

RESOLUTION ON THE REPORT OF THE SUPERINTENDENT OF EMIGRATION ON INLAND EMIGRATION FOR THE YEAR 1882.

GENERAL DEPARTMENT—INLAND EMIGRATION.

Calcutta, the 3rd July 1883.

RESOLUTION.

READ—

The Report on Inland Emigration for the year 1882.

The report has reached the Government punctually on the date fixed for its submission, and in this respect contrasts very favourably with its recent predecessors. It is the first prepared for the calendar year, that period having been substituted for the official year for the sake of uniformity with the Assam Report, and is submitted by Dr. Grant, who was in charge for nine months of the year. Dr. Richards officiated as Superintendent during the remaining three months.

2. The new Inland Emigration Act I of 1882, which came into force in January 1882, and was thus in operation during very nearly the entire period under report, has effected some important changes in the law. While retaining safeguards against irregular recruitment, and the improper treatment of emigrants on their journey to the employer's estate and during the term of their engagement, it seeks to facilitate emigration to the tea districts by providing for an increase in the number of registering officers in the recruiting districts; by permitting garden-sirdars to recruit any number of persons, whereas they were formerly restricted to 20; by severing all connection between them and contractors; and by authorizing the employment of local agents to supervise the operations of garden-sirdars, or, under special license, to recruit emigrants themselves and despatch them to the labour districts without the assistance of sirdars. The term for which contracts may be made has also been extended from three to five years, and no restriction whatever is imposed on free emigration. The labourer may now proceed to the tea districts either as a free emigrant, taking work on an ordinary contract, or entering into a contract under the Act after his arrival, or as an emigrant recruited and registered under the Act. In the first case he is in no way subject to the Act; in the second he is subject only to such of its provisions as refer to the carrying out of the labour contract; and in the third he is completely under the Act from the date of his recruitment until the expiration of his engagement. The extension of the railway system, which has taken place in recent years, has much diminished the need for a stringent emigration law in the present day, and with further improvement in the means of communication, and the consequent shortening of the journey between Assam and the districts from which the emigrants are drawn, the continuance of any special law at all will probably be found unnecessary after the lapse of a few years. An important step in the promotion of rapid communication with the Assam Valley will shortly be taken by the establishment of a daily steam service between Dhubri and Dibrugarh, Messrs. Macneill and Company, who have taken the contract on a subsidy, have engaged to accomplish the voyage between these places regularly in four days.

3. The following tabular statement gives the total number of emigrants and their dependents who were registered and forwarded through Calcutta and Goalundo during the last two years:—

YEARS.	REGISTERED FOR TRANSMISSION THROUGH LICENSED DEPÔTS.						Class C coolies recruited by sirdars and registered to proceed to the labour districts of Assam, Cachar, and Sylhet, independently of the contractors' depôts.	Total number registered.
	Class A coolies recruited by licensed recruiters on behalf of contractors.			Class B coolies recruited by certificated garden-sirdars authorized to recruit more than 20, and to transmit them through contractors' depôts.				
	Via Calcutta for Assam, Cachar, Sylhet, and Chittagong.	Via Goalundo for Cachar and Sylhet.	Total.	Via Calcutta for Assam, Cachar, Sylhet, and Chittagong.	Via Goalundo for Cachar and Sylhet.	Total.		
1881	5,535	683	6,218	1,048	574	1,622	1,057	8,704
1882	6,406	2,029	7,905	943	1,007	1,450	1,667	10,103

It has for some years past been considered desirable to discourage, as far as possible, recruitment through the agency of contractors, and promote in its place the general employment of garden-sirdars; and the provisions of the new law, permitting the appointment of local agents, were introduced especially to further this object. From the preceding statistics, however, it appears that the recruitment of coolies through contractors has not diminished during the past year. There has indeed been a decrease in the number of contractors, eight only having held licenses at the close of the year against 10 at the commencement and there was also a decrease of 15 in the number of their recruiters; but the actual number of emigrants recruited by them was larger than in the previous year. It is true that there has been an increase of over 600 in the number of certificated garden-sirdars, but they recruited a far smaller number of labourers than might have been expected. It is not to be supposed that these sirdars were mostly idle, and there is therefore ground for thinking that the system of voluntary aided emigration, which was brought to notice by the Commissioner of Chota Nagpore last year, may have received a stimulus from the exertions of these newly licensed garden-sirdars. Until, however, the Lieutenant-Governor has before him the statistics of registration in Assam of free emigrants under sections 111 and 112 of the Act, it is impossible to verify this surmise, and the Superintendent of Emigration will therefore be instructed to place himself in communication with the Assam authorities with a view to ascertaining the extent to which this sort of emigration has gone.

Dr. Grant brings the fact to notice that the percentage of licenses cancelled for misconduct rose from .90 in 1881 to 2.61, a result which he attributes to increased competition among recruiters, arising from continued difficulty in obtaining the number of labourers required, and consequent temptation to resort to irregularities. The malpractices, however, cited in the report, while they fully shew the necessity of still maintaining an official check over the proceedings of these recruiters, do not support Dr. Grant's views regarding the growing scarcity of emigrants. Misbehaviour on the part of recruiters will probably be removed by continued attention to employing men of good character, and visiting breaches of the law with adequate punishment. The number of licenses granted to local agents by the end of the year was 48; but as the first license was not taken until August, no opinion can as yet be formed of the working of this system. Out of a total of 2,329 garden-sirdars who received certificates during the year, 1,074 were placed under the control of local agents. An increase of 608 took place in the number of these recruiters, but one certificate only was cancelled against three in the previous year.

4. The returns summarised in the preceding paragraph shew an increase of activity in recruiting operations during the year, the total number of emigrants and their dependents registered being 10,902 against 8,794 in 1881. Of these, 6,409 were registered for transmission through the Calcutta depôts, 3,036 for transmission through the Goalundo depôts, and 1,457 to proceed in charge of garden-sirdars independently of the depôts. The chief centres of registration were—Burdwan (1,803), the 24-Pergunnahs (1,584), Furreedpore (656), Bankoora (299), Midnapore (255), and Beerbhoom (254), in Bengal; Shahabad (1,288), Monghyr (878), the Sonthal Pergunnahs (775), Gya (339), and Bhagulpore (210), in Behar; and Hazaribagh (752), Manbhoom (616), Lohardugga (534), and Singbhoom (218), in Chota Nagpore. Of the remaining 441 emigrants, 190 were registered in the North-Western Provinces, and the rest in Rajshahye, Nuddea, Patna, Durbhunga, and Cuttack. The places of registration afford, however, no criterion of the locality to which the emigrants belong, registration being in a vast number of cases effected in a different district from that in which the emigrant has his home. This is particularly the case with regard to the registrations in the 24-Pergunnahs, Burdwan, and Furreedpore, as shewn in Statement VIII appended to the report. Of 1,519 persons registered in the first district for transmission through contractors' depôts, only 14 belonged to the district, the rest having come from all parts of Bengal and Behar, from various districts of the North-Western Provinces and Oudh, and from Madras. Labourers gravitate towards Calcutta in search of work, and before they reach the capital, or while there, are induced to emigrate. In Burdwan only 173 persons were contributed by the district.

itself, out of 1,346 registered; and in Furreedpore not one of the 656 persons registered was a resident of the district. The whole of the latter evidently consisted of emigrants who came, or were brought, to Goalundo for registration. The Lieutenant-Governor will be glad to have in the body of the report in future full details of the localities which supply the emigrants of the year. Information on this point is furnished in Statement VIII of the present report, but not in a complete form.

5. The 6,409 emigrants registered for transmission through the Calcutta depôts were reduced by 150, or 2·34 per cent, before their arrival at the depôts, the loss being due to the detention of 27 persons, the discharge of 8, and the desertion of 57 at the mofussil depôts, and the death of 1 and the desertion of 52 persons on the journey. These figures compare favourably with those of the preceding year, when 292, or 4·43 per cent, of the registered emigrants did not reach the depôts. The total number of emigrants accommodated at the depôts during the year, inclusive of 146 remaining from 1881, and 2 infants born in depôt, was 6,407. Of these, 102 were rejected, 389 were discharged, 492 deserted, and 4 died of cholera and 8 from other causes, making a total of 995 casualties; and of the remainder, numbering 5,412, 5,141 were despatched to Goalundo, and 20 to Chittagong, leaving 251 in depôt at the close of the year. The sanitary arrangements of the depôts are reported to have been satisfactory, and the Medical Inspector remarks that, though the actual number of deaths, altogether 8, was somewhat higher, the actual number of sick was lower than in the preceding year. Of the 8 deaths, 4 resulted from cholera. The rejections of emigrants were far fewer than in 1881, and this is no doubt correctly attributed to the fact that the Medical Inspector is no longer required to ascertain the labourer's physical fitness for work. The desertions and discharges, however, shew a very large increase, which is not fully accounted for by the explanation that in some cases coolies, especially old returned emigrants from the colonies, offer themselves for registration with the intention of merely securing a free passage to Calcutta. The Lieutenant-Governor desires that this subject may be more fully investigated by the Superintendent, and noticed at greater length in the next report.

6. Of the 3,036 emigrants registered for transmission through the depôts at Goalundo, 36 were detained at the mofussil depôts, 72 deserted, 13 died, and 164 did not arrive, the number actually received being thus reduced to 2,751. Similarly, the number despatched from the Calcutta depôts was reduced to 5,139 by one death and one desertion on the journey. The total arrivals at Goalundo during the year were therefore 7,890, and the addition to this of 52 remaining from the previous year, and 1 infant born in depôt, raised the total number accommodated in the depôts to 7,943. Out of these, 84 deserted, 23 died, 13 were released from their engagements, and 15 were rejected, leaving 7,808 available for despatch to the labour districts. The number actually embarked was 7,789, and 19 remained in depôt at the close of the year. The percentage of deaths, desertions, and detentions among the emigrants registered for despatch direct to Goalundo was smaller than in the previous year, but enquiry is necessary regarding the 164 emigrants who failed to reach Goalundo. The Superintendent should ascertain and report whether, as suggested by Dr. Richards, they proceeded direct to Dhubri, or, if not, what became of them. The instances of gross neglect of emigrants on the journey to Goalundo and Dhubri, which have lately been brought to the Lieutenant-Governor's notice, render it essential that an explanation should be obtained of every case in which an emigrant disappears on the way from the recruiting to the labour district. As regards the casualties at Goalundo itself, there was an increase in the percentage under all heads except rejections. The increase was specially marked in desertions.

7. In addition to the 7,789 contractors' coolies 30 coolies, collected by garden-sirdars also embarked at Goalundo. Of the total number (7,819), 3,689 proceeded to Assam, and 4,130 to Sylhet and Cachar. The Assam emigrants travelled by licensed steamers, which made 66 trips, carried an average of 56 persons on each occasion, and made passages averaging 16 days. The

greater prevalence of cholera during the year unfortunately caused a higher rate of mortality on these voyages than in the preceding two years, but this result seems to have been in no way attributable to any defects in the general arrangements of the steamers. The total mortality was 27, consisting of 21 cases of cholera and 6 deaths from other causes; but of the cholera cases no less than 19 occurred in a single trip, when the disease was very prevalent in the districts through which the vessel passed.

8. The Sylhet and Cachar emigrants travelled by country boats, the number for the former district being 1,228 and for the latter 2,902. The desertions and deaths on the way amounted to 137, or 3.31 per cent., against 78, or 2.63 per cent. in 1881, the difference between the two years lying almost entirely in the number of deaths from cholera. There were 101 such deaths in the past year, as compared with 51 only in 1881. The disease is said by Dr. Richards to have been principally contracted in the narrow rivers of Sylhet.

9. Of the 1,457 coolies registered to proceed to the labour districts in charge of garden-sirdars, 30 were conveyed to Assam by steamers from Goalundo, while 817 started from Kooshtea and other places for Sylhet, and 610 for Cachar. The casualties among the Sylhet batches were 5, and among the Cachar batches 21.

10. The operations of the year may, in conclusion, be thus summarised. The total number of emigrants and their dependents originally registered was 10,902, and this number was raised to 11,103 by the addition of 198 persons remaining from the previous year, and three infants born in depôt during the year. After allowance, however, for casualties of all kinds, amounting to 1,749, or 15.75 per cent., 9,354 were actually available for the labour districts, of whom 9,084 were landed there, the rest remaining in depôt at the close of the year. Of the 9,084 who reached the labour districts, Assam received 3,658, Cachar 3,398, Sylhet 2,008, and Chittagong 20. In 1881, the registrations were 8,794 in number, and there was a balance of 254 emigrants from the previous year, making a total of 9,048. From this number 1,156, or 17.19 per cent, were lost through casualties, and only 7,296 reached the labour districts, the rest remaining in depôt at the end of the year. Both the original registrations and the number of coolies landed in the labour districts were thus larger in the past year, and if it be considered that many emigrants proceeded to the labour districts without being registered under the Act, it will appear that emigration from these provinces to Assam is growing in magnitude.

11. The thanks of the Lieutenant-Governor are due to both Dr. Grant and Dr. Richards for their efficient work during the year.

By order of the Lieutenant-Governor of Bengal,

A. P. MACDONNELL,

Officiating Secretary to the Govt. of Bengal.

ADMISSION OF FEMALES TO THE CALCUTTA MEDICAL COLLEGE.

No. 418T.—G, dated Darjeeling, the 29th June 1883.

From—A. P. MACDONNELL, Esq., Offg. Secy. to the Govt. of Bengal, General Dept.,

To—The Director of Public Instruction.

I AM desired by the Lieutenant-Governor to acknowledge the receipt of your letter of the 4th instant, on the subject of admitting females to the classes of the Calcutta Medical College, and in reply to communicate to you the following instructions and remarks.

2. The question of the admission of females to the Medical College classes was first raised in 1876, and it then met with a favourable reception from Sir Richard Temple, who was Lieutenant-Governor. Subsequently, in 1879, the matter was again discussed; but on neither occasion had the discussion any practical results. Last year the Director of Public Instruction brought the question before the Council of the Medical College in connection with a wish which had been expressed to him by the parents of some young ladies that their daughters might be permitted to attend the medical classes. Mr. Croft advocated the admission of female students to the College classes; and, influenced by the advantages which, in his opinion, a body of qualified female doctors would confer on the community, even urged on the Council the propriety of admitting them on a reduced educational standard. Under the rules framed by the Senate of the Calcutta University, which are now in force, to qualify for admission to the Medical College, young men must pass the First Arts Examination. Mr. Croft recommended the admission of female students to the same privilege on their passing the Entrance Examination. The College Council, however, refused sanction to the admission of females on those terms; and when it was afterwards proposed to waive any exceptional favour to lady competitors in the way of preliminary examination, and to admit them on the same terms as males, the Council affirmed its previous decision, and resolved not to admit females on any terms to the classes of the Medical College. This resolution of the Council you now report for the orders of Government.

3. The Lieutenant-Governor has considered the important question thus submitted to him, and has examined the opinions recorded upon it by the members of the Medical College Council. He regrets to say that in none of the opinions, except those recorded by Drs. Coates, Harvey, and Anderson, can he find any facts which bear examination, or any reasoning which stands the test of criticism. All the force of facts and argument lies on the side of those gentlemen who favour the admission of females to the Medical College classes; and therefore, even had Mr. Rivers Thompson not formed, independently of this reference, a strong opinion on this subject, he would be bound to approve of that course which, on the papers before him, is recommended by an overwhelming weight of argument. But the admission of females to medical education is a matter on which the Lieutenant-Governor had already formed a clearly affirmative judgment, and he has therefore had less hesitation in overruling the decision of the Council of the Medical College than, looking to the weight which must ordinarily attach to the decision of such a body, he otherwise might have had.

4. On this question, looked at from the standpoint of general policy, as well as of individual freedom, there is not, in Mr. Rivers Thompson's opinion, any room for doubt as to the action which Government should take. It is indeed, in the Lieutenant-Governor's judgment, a subject of great reproach to the Bengal Presidency, in which education has made such wide progress, that it should be so far behind other provinces in matters regarding the medical education of native ladies; and this reproach is the more appreciable in that the backwardness of Bengal in this respect would seem to be due, not so much to the prejudice of native parents and guardians (which might in the present circumstances of India be only natural) as to the attitude which the Medical College Council have thought fit to assume. Already these provinces have suffered from the Council's failure to take a broad and unprejudiced view on this question; for the Lieutenant-Governor

learns to his regret that some Bengali ladies, fully qualified by educational attainments for admission to the College, have had to betake themselves to the more liberal Presidency of Madras, there to prosecute those medical studies from which the Council of the Calcutta Medical College had excluded them. It is, in Mr. Rivers Thompson's opinion, clearly opposed to the public good, as well as to legitimate private interests, that such a state of things should continue, and that the educational system of Bengal, progressive in other respects, should be illiberal and retrograde in this. Illiberality here has great and numerous evil consequences. It encourages zenana prejudices; it strengthens the barriers of caste; and it suppresses the natural and reasonable aspirations of Indian ladies to enter a profession which would find, in India of all countries in the world, a wide sphere of action and of beneficent service. Every day that passes widens our knowledge of the fact that among the native community there are women in every position of life who would prefer death to treatment by a male physician, and the misery caused by neglected, and unskillfully treated illness must be widespread and most lamentable. There is but one way by which this suffering can be relieved, and that is by the medical education of females; for in the present conditions of Indian life it would be useless to wait till opposition, based upon prejudices (if such they can be called), is removed. The Lieutenant-Governor therefore considers it his duty to support this movement; and he looks on the objections which have been made to it, on the ground of the difficulty of teaching mixed classes, or the alleged inaptitude of females for the profession of medicine, as unsubstantial and obsolete. Experience gained in Europe, in America, and in Madras, has shewn that mixed classes can be taught without any bad results; while the aptitude of women for the study and profession of medicine is, in the Lieutenant-Governor's opinion, no longer open to discussion or doubt. Even if the aptitude of women for the profession of medicine were still an open question, it would be an inadequate objection here, for the fitness or unfitness of women to practice medicine can only be proved by experience. The issue—therefore is, shall it be put to that proof in Bengal? The ladies who apply for admission to the College will be the only losers if they fail in the trial: the community will be the great gainers if they succeed. For his own part the Lieutenant-Governor has no doubt they will succeed far beyond the expectations of their most sanguine supporters, and he looks forward to a not distant time when Calcutta hospitals shall be partly officered by lady doctors. And if the success of the principle be established in the capital, there is no reason why our medical schools in the provinces should not afford opportunities for a more general extension of the policy, with incalculable advantage to the country.

5. As regards the proposal to lower, in favour of females, the educational standard of admission to the Medical College, the Lieutenant-Governor is entirely of your opinion that it should be negatived. Mr. Rivers Thompson would open the College doors wide to students of both sexes; but he would not specially favour either sex. Did the power of reducing the educational standard which qualifies for admission to the College rest with him, and not, as it does, with the Senate of the University, the Lieutenant-Governor would certainly abstain from exercising it, for he knows of no profession in which a liberal preliminary education, training the faculties of observation and thought, is more needed than in the profession of medicine. Mr. Rivers Thompson therefore thinks it would be conferring a fatal gift on the cause of female medical education to expose it to the risk of practical failure by withdrawing the necessity for that solid foundation of general knowledge on which the superstructure of technical information can alone be safely built. In conclusion, I am to say that, in now declaring females fully admissible to the classes of the Calcutta Medical College, the Lieutenant-Governor is confident that he can count on the loyalty and zeal of the Professors to bring his policy on this question to a successful issue.

6. All arrangements, in regard to separate seats, screens, and waiting-rooms for females, which it has been suggested may be necessary in order to give effect to these orders, can be safely entrusted to the discretion of the Principal, Dr. Coates.

Dated Calcutta, the 4th June 1883.

From—G. BELLETT, Esq., Offg. Director of Public Instruction,
To—The Secretary to the Government of Bengal, General Department.

I HAVE the honour to forward copies of the letters and documents named in

This office No. 2823, dated 5th May 1882, to the Principal, Medical College.
Letter No. 204, dated 10th June 1882, from the Principal, Medical College.

Letter No. 472, dated 31st October 1882, from the Principal, Medical College.

Letter No. 108, dated 12th May 1883, from the Principal, Medical College, in original.

Letter No. 125, dated 18th May 1883, from the Principal, Medical College.

the margin, and to solicit the orders of Government on the subject of the admission of females to the classes of the Medical College.

2. In doing so, I beg to append a short account of what has taken place with regard to the question.

3. A little more than a year ago, on the 5th May 1882, Mr. Croft addressed to the Principal of the Medical College a letter, No. 2823. In this letter he asked for the opinion of the Principal and Council of the College as to the admission of females to the Medical College classes, and urged that they should be admitted on the ground of the great alleviation of suffering which would probably result if there were a body of qualified practitioners to whose admission to zenanas there would be no objection, as well as on the ground that if the Medical College classes were thrown open to females, a career of usefulness would be provided for those ladies, native and others, who are now passing the University examinations. Mr. Croft proposed to recommend to the University the admission of female candidates to the examination for L.M.S., if they have passed the Entrance examination.

4. Mr. Croft's suggestion was laid before the Council of the Medical College, and at a meeting of the Council, at which five members only were present, resolutions were passed by a majority of four adverse to the proposition, and recommending that, if medical education for women was found to be necessary, a separate college for women be established, while expressing the opinion that such education was not extensively demanded, and that an extension of the existing training in midwifery would be sufficient to meet the requirements of the case.

5. In communicating these resolutions to this office, the Officiating Principal of the Medical College appended the opinions of individual members of the Council, and from these it appears that on one point, viz. that of lowering the qualification for entrance to the college, the whole Council was unanimously adverse.

6. Some members of the Council objected to medical instruction to women altogether; others to instruction given to mixed classes. The need for lady doctors was denied by some, while others asserted the general unfitness of the sex for the practice of this profession. The single supporter of Mr. Croft's suggestion was the Officiating Principal, Dr. Harvey (Dr. Coates, the Principal, who is a strong supporter of the scheme, being on leave), and I beg to refer you to Dr. Harvey's note, which winds up the collection of opinions for what seems to me to be a very satisfactory answer to all the arguments adverse to the scheme.

7. On the 12th September, after Dr. Coate's return from leave, Mr. Croft forwarded the resolutions and opinion of the Council to the Principal for his opinion. Dr. Coates, in his answer, relied to a certain extent on the regulations of the University, which, under a misapprehension, he deemed to be of such force as to compel him as Principal to admit lady students. But he passes on to state the unanimous opinion of those connected with medical schools in Switzerland whom he had consulted, which were to the effect that "the presence of ladies in class-rooms had a refining effect on all present." And after stating his willingness to give a separate waiting-room and dissecting-rooms for the use of lady students, and his opinion that it did not rest with the Council to decide whether or no there is the demand for lady doctors, which is asserted to exist, he concludes by calling attention to a letter from the Principal of the Madras Medical College, which he encloses.

8. In this letter the Principal states that the Professors find no difficulty in lecturing to mixed classes, and that no signs of demoralization in consequence of the mixed classes had been observed.

9. When Miss Bose applied for admission to the Medical College, there was no bar in the form of want of qualification, she having taken her B.A. degree; and on her applying to me for permission to admit her, and on his stating that he believed the strong feeling of the Council to be against the lowering of the qualification, I suggested that the Principal should lay Miss Bose's case specially before the Council.

10. The result was, as you will perceive, only a reiteration of their unwillingness to admit female students on the part of the majority of the Council.

11. The question, then, on which I solicit the orders of Government is whether the opinion of the majority of the Council of the Medical College is to carry sufficient weight to exclude those ladies who are otherwise qualified from entering the Medical College. It seems to me that the arguments which the opponents of the admission of females have advanced have been disposed of by the statements of Dr. Coates and Dr. Harvey, the evidence of the Professor in the Swiss medical schools, and the letter of the Principal of the Madras Medical College.

12. The necessity for trained medical women is, I cannot doubt, completely established; and if there be this necessity, a path of honourable and profitable employment is open to such a class, if called into existence.

13. With regard to the lowering of the qualification, Mr. Croft was of opinion, as shown in his letter No. 2823, that for females it would be sufficient qualification if it were required that they should have passed the Entrance examination. It is with considerable reluctance that I state my dissent from Mr. Croft's opinion, but I think that in this matter the unanimous opinion of the Council is entitled to great weight. According to the rules now in force no student is permitted to enter the college unless he has passed the F.A. examination. The object of insisting on this is to ensure that the student's knowledge of English and general intelligence should be such as to ensure his being able to follow with understanding the lectures delivered.

14. I am inclined to think that the passing of the Entrance Examination does not sufficiently ensure this knowledge and intelligence, and I am doubtful whether it would be for the advantage of the female pupils themselves that they should start with a lower qualification than their male fellow-students.

15. This, however, is a matter of opinion, and, as I have already said, I unwillingly differ from Mr. Croft on the matter.

16. I may add that I feel some doubt as to whether the governing body of the University would agree to the change, which would, in consequence, have to be made in the University Regulations.

17. In conclusion, I beg to solicit that early orders may be passed on the subject, as the session of the Medical College begins on the 15th of this month.

Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the Crops in the different Districts of Bengal, as reported to Government during the week ending the 30th June 1883.

No.	District, and date of return.	Rainfall at Sudder Station in inches.	Character of the weather, state and prospects of the crops, and state of health at date.
BENGAL.			
<i>Western Districts.</i>			
BURNIHAB DIV.	1 Burdwan, June 30 '83	3.37	Weather—rainy, with high wind. Ploughing and transplanting going on throughout the district. Public health fair, except in the town of Burdwan.
	Culina	0.67	
	Cutwa	0.61	Weather—cloudy and rainy with storms. Prospects of crops favourable. <i>Aus</i> paddy being transplanted in some places. Indian-corn being sown. Public health good.
	Raneegunge	8.00	
	2 Bankura, " 30 ..	1.02	
	Bishnupore	0.81	
	Maliara	4.23	Weather—cool and showery. High wind in latter part of week. Ploughing and sowing of rice crop in progress. <i>Til</i> being cut. Prices slightly higher. General health satisfactory.
	Khatra	3.12	
	3 Beerbhoom, " 30 ..	1.64	Weather—cloudy and rainy with strong wind during the last two days. Agriculture making good progress. Public health good.
	Rampore Haut	2.54	
PRESIDENCY DIV.	4 Medinipur, " 30 ..	2.79	Weather—cloudy, with high wind. Prospects of all crops good in the Sudder and Jehanabad sub-divisions, and improving in Serampore. General health good.
	5 Hooghly, " 30 ..	0.91	
	Howrah July 2 ..	2.78	Gale of wind on Thursday night (23th) from north followed by two days' showery weather. Jute reported damaged by floods along Damoodar. <i>Aus</i> paddy growing. Sowing of <i>aman</i> going on. Price of rice high.
	Oolooberia	2.50	
	<i>Central Districts</i>		Weather—cloudy; attended with occasional showers of rain. Transplanting of <i>aman</i> paddy going on in low lands. Early crops doing well. Prospects good. Public health generally good.
	6 24-Pargannas, July 2 '83	3.49	
	7 Nuddea, June 30 ..	0.59	Weather—rainy, cloudy and cool. Crops doing well. Fever unchanged; cholera has abated.
	Kooshtea	2.25	
	Moherpore	0.71	
	Choudanga	1.66	
	8 Khoolna, " 30 ..	3.03	Weather—cloudy, with many showers. Prospects favourable. Ploughing going on, and some <i>aman</i> rice has been sown. Public health good.
	9 Jessore, " 30 ..	1.34	
	Jhenida	0.29	Weather—cloudy and rainy. Rice crop doing well. <i>Til</i> being reaped. Prospects favourable. Public health good, except in Bongong sub-division where deaths from fever still continue.
	Magura	1.84	
RAJSHAHY AND CHOOCH BEHAR DIV.	10 Bongong	0.65	Weather—much cooled down; a strong east wind blowing with drizzling showers at times. State and prospects of crops favourable. <i>Bhadai</i> thriving well, and <i>aman</i> sowing still continues. Public health on the whole good.
	Mooshadabad, " 30 ..	2.27	
	11 Dinagepore, June 29 '83	3.45	Weather—cloudy and rainy. Prospects of <i>bhadai</i> and sugarcane good. Jute slightly injured in Rajrampore thana by excessive rain.
	12 Rajshahy, " 30 ..	1.12	
	Nattore	Nil	Weather—cloudy and slight rain. Gales of wind for two days. Crops doing well. <i>Til</i> crop appears an average one.
	Nowgong	0.81	
	13 Rudrapore, " 30 ..	3.62	Weather—seasonable. Prospects of <i>aus</i> rice and jute good. <i>Kaon</i> and <i>cheena</i> being reaped. Transplanting of <i>aman</i> rice has begun. Cholera somewhat prevalent in some parts of the district.
	Kurigram	3.07	
	Gaibanda	7.94	Weather—continues cool and rainy. Sowing of <i>aman</i> continues. <i>Til</i> and <i>kaon</i> are being reaped. Public health good, except in four villages in Bogra thana where cholera has been reported.
	Nilphamari	5.44	
DACCA DIV.	14 Bogra, " 30 ..	0.98	Weather—warm and cloudy with strong easterly wind. Crops progressing well throughout the district.
	15 Culna, " 30 ..	1.26	
	16 Darjeeling, " 30 ..	5.05	Weather—seasonable. All crops doing well. There is still a little cholera both in the Terai and hills.
	17 Insipigore, " 30 ..	13.16	
	Cooch Behar, " 29 ..	12.45	Weather—seasonable. Prospects generally fair. From two thanas crops are reported backward owing to heavy rain.
	up to 27th. ..	8.45	
	Dinhatia up to 24th. ..	16.49	
	Mathabhanga up to 23rd. ..	14.02	
	Meckligunge up to 23rd ..	14.02	Heavy rain during early part of week, then a partial heat with occasional showers. Weather close and warm. Prospects of jute improved. <i>Ditra</i> rice harvest going on slowly. <i>Aman</i> being transplanted. Cholera abating, but still bad in places.
	20 Meckligunge, " 28 ..	2.73	
	<i>Eastern Districts</i>		Weather—windy and cloudy. Harvesting of <i>til</i> and <i>aus</i> paddy continues. Sowing of <i>aman</i> paddy going on. Jute and sugarcane thriving.
	18 Dacca, June 30 '83	2.34	
	Manickgunge	2.42	Weather—very high winds during the last three days; very gloomy with frequent showers. State and prospects of jute, paddy, sugarcane, &c., good. Public health very fair.
	Munshigunge	0.46	
	Nasirgunge	1.43	Weather—seasonable. <i>Aus</i> crop doing well. Cultivation of <i>aman</i> going on rapidly. General health good.
	19 Furrusepore, " 30 ..	1.30	
	Goulundo	1.55	Weather—warm, with cloudy sky and occasional heavy showers; high east wind since evening of 23th. State and prospects of crops slightly improved. Rivers risen very much during the week. General health good, except that cholera continues in Suerpur town.
	Madanipore	2.45	
	20 Maccherkunge, " 28 ..	2.73	
	21 Mymensingh, " 29 ..	0.89	
	Jamapora	1.16	
	Kishoregunge	1.37	
	Atten	1.87	
	Netrokona	2.34	

No.	District, and date of return.	Rainfall at Sudder Station in inches.	Character of the weather, state and prospects of the crops, and state of health at date.
BENGAL.—concl.			
Eastern Districts.—concl.			
CHITTAGONG DIV.	22 Chitragong July 3 '83	7.42	Weather—seasonable. Transplanting of <i>aus</i> and sowing of <i>amun</i> going on. Prospects fair. Prices steady. Fever and cattle-disease bad in Cox's Bazar. Cholera not yet abated.
	23 Nonkholly, June 29 "	3.9	Weather—variable; generally cloudy; rain scanty; at times very hot. <i>Aus</i> paddy ripening and <i>amun</i> paddy being transplanted generally.
	24 Tipperah, " 29 "	2.04	Weather—rainy. State and prospects of crops good. Public health generally good.
	Brahmunbaria " " "	0.34	
	Chandpore " " "	1.75	
CHITTAGONG DIV.	25 Chitragong Hill " 26 "	1.35	Heavy showers throughout the week. <i>Jhum</i> doing well. Cotton crop will be short, many of the young plants having been damped off.
	Hill Tipperah " 27 "	0.76	Weather—warm. Lands being prepared for transplanting of <i>amun</i> paddy. <i>Moong</i> and sugarcane looking bright. Public health good.
BEHAR			
PATNA DIV.	26 Patna, June 30 '83	1.62	Weather—hot. Sowings of <i>bhadoi</i> and paddy crops are being pushed on in some places. <i>Makai</i> has commenced to germinate. A few cases of cholera reported from Barh and Behar sub-divisions.
	Barh " " "	1.46	
	Behar " " "	1.91	
	27 Gaya " 30 "	0.53	Weather—overcast, with high winds and showers. Rice sowings are being briskly pushed forward. <i>Murua</i> is being transplanted. Millet and coarse grains largely sown. Sugarcane promises well. Cholera very prevalent and cattle-pox reported over a large area.
	28 Shahabad, " 30 "	3.85	Weather—cool and moist in the east of the district, hot and dry at Bhabooah in the west. East wind. Prospects of crops favourable, except at Bhabooah, where more rain is wanted.
	Buxar " " "	0.4	
	Bhabooah " " "	1.32	Weather—cool and cloudy with high wind from north-east. The present fine weather following the rain is most favourable for <i>makai</i> , <i>murua</i> and other <i>bhadoi</i> crops. Low land <i>moong</i> much injured; also low land indigo in some factories. Transplanting of paddy going on vigorously. Prices stationary. Cholera disappearing everywhere. Health generally good.
	29 Durbhanga, " 30 '83	1.32	Weather—cool, with east wind. All crops looking well. <i>Bhadoi</i> and <i>aghani</i> sowings in progress. Early rice looks promising. Cholera has ceased in Hajeeপুর sub-division. General health much improved in Sudder and Sesta-murhee sub-divisions.
	30 Mozuffarpore, " 30 "	2.64	Weather—hot and close, generally cloudy. Sowings of <i>makai</i> , <i>kodo</i> , and <i>rahar</i> going on. Transplanting of <i>murua</i> has commenced. Indigo prospects good. The rain has done much good to the crops in field. Sporadic cases of small-pox still reported from Gopalgunge, otherwise public health good. Prices stationary.
	Hajeeপুর " " "	0.52	
BHAGALPORE DIV.	Sootamurhee " " "	1.90	Weather—hot and cloudy. Rain has fallen which will facilitate agricultural operations. Sowings of <i>bhadoi</i> crops commenced. Indigo prospects good. Public health satisfactory.
	31 Saran, " 30 "	3.36	Weather—cool and seasonable. Preparation of lands going on rapidly. Sowing of Indian-corn commenced in some parts. Prospects generally promising. Public health good.
	Sowan " " "	4.61	Weather—in first part of week hot and sultry, but latterly cool; strong easterly winds. In north of district heavy rain, especially in Muddelpoorah, where 10-20 inches were registered in one day (25th instant.) Prospects good, except in Muddelpoorah, where floods have damaged the young paddy. Fresh seed is being sown. Health good.
	Gopalgunge " " "	1.49	Weather—fine, with strong easterly wind. Prospects of crops very good. Indigo is a little damaged. Health fair.
	32 Champaran " 30 "	Nil	Rainfall scanty. Weather showery and sultry for first four days of the week, since then sky overcast, and a very strong easterly wind blowing. Rivers rising. Standing crops doing well. Public health generally good.
	33 Mongher, June 30 '83	1.19	Weather—cloudy, showery and unsettled. <i>Bhadoi</i> and winter rice sowings in hand. Transplanting going on in the eastern low lands. A little small-pox in Deoghur.
	Bogusrai " " "	3.57	
	Jumui " " "	3.49	
	34 Bhagalpore, " 30 "	1.13	Weather—cool and cloudy with heavy rain on the 28th. Young plants of <i>baali</i> and <i>sarad</i> rice growing well; the former being harrowed in some places. Common rice selling at from 24 to 25 seers per rupee. Public health good.
	35 Purneah, " 30 "	1.17	Weather—showery, with strong south-westerly breeze. <i>Sarad</i> sowings continue in some places, elsewhere puddling has commenced. Cotton being gathered. Common rice selling at from 25 to 42 seers per rupee. Public health good.
	Kissengunge " " "	13.01	Weather—cloudy and rainy. Prospects of crops good. Sowing and ploughing going on. Sugarcane progressing well. Public health generally good.
ORISSA DIV.	Amareah " " "	11.95	
	36 Maldah, " 30 "	1.11	Weather—cloudy. Good rain reported throughout the district. Sowing of paddy and <i>bhadoi</i> crops going on. General health good.
	37 Sonthal Pargha, " 30 "	0.91	Weather—rainy. Prospects of crops favourable. Public health good.
	Deoghur " " "	1.29	Weather—seasonable. Rainfall has been general and sufficient for present requirements. Everything doing well. Agricultural prospects favourable. General health good.
	Rajnimal " " "	2.62	Weather—rainy and cool. Sowings progressing everywhere. Rice seedlings promise well. Indian-corn, <i>moong</i> , <i>rahar</i> , &c., being sown on uplands. Sugarcane flourishing. Public health good.
	Jamtara " " "	0.84	
	Pakour " " "	2.13	
	Godda " " "	0.23	
	38 Cuttack, June 29 '83	3.61	
	39 Pooree, " 28 "	0.80	
CHOYA NAGPORE, South-West Frontier Agency.	Khoorda " " "	1.16	
	40 Balesore, " 29 "	3.33	
	41 Masaribagh, June 29 '83	1.21	
	42 Lohar-lugga, " 30 "	1.7	
	Palamow " " "	0.4	
	43 Singbhoom, " 29 "	1.44	
	44 Manbhoom, " 30 "	1.90	
	Govindpore " " "	0.54	

Published for general information.

CALCUTTA, STATISTICAL DEPT.,
The 3rd July 1883.COLMAN MACAULAY,
Secy. to the Govt. of Bengal.

Meteorological Report of the Province of Bengal

METEOROLOGICAL DIVISION.			STATION OBSERVATIONS.															
			AIR PRESSURE.			WIND.		TEMPERATURE.							Average humidity at 10 A. M. for week.		Average cloud amount at 10 A. M. for week.	
			Mean barometer height, 10 A. M.	Mean reduced to sea-level.	Variation from mean.	Prevailing direction.	Mean wind velocity miles per day.	Highest during week.	Lowest during week.	Mean maximum temperature.	Mean minimum temperature of week.	Mean daily temperature of week.	Variation from normal mean of week.	Mean 10 A. M. temperature.				
DISTRICT.	Representative station.																	
ORIGINAL.	Pooree	Gopalpore	29.672	29.622	—	S	196	85.6	79.8	83.5	80.6	83.0	—	83.3	83	5.2		
		False Point	876	897	—001	Variable	235	90.9	70.6	87.9	77.0	83.3	—1.8	84.0	76	7.4		
	Cuttack	Cuttack	823	803	0	Variable	79	94.4	76.3	92.0	78.3	85.2	—1.0	85.6	75	8.9		
	Balasore	Balasore	822	880	—	Variable	89	90.4	75.7	88.9	77.8	83.4	—	84.9	80	7.7		
SOUTH-WEST BENGAL.	South-West Midnapore	Saugor Island	837	803	—033	S	442	92.2	74.5	89.8	78.9	84.5	—0.3	85.2	77	6.4		
	South 24-Pargunnahs	Midnapore	448	—	—	SE	?	90.5	76.3	93.8	77.3	85.6	—	85.1	79	6.6		
	24-Pargunnahs																	
	Howrah	Calcutta	840	870	—032	E	168	91.5	76.7	89.5	78.2	83.9	+0.1	84.7	81	9.0		
	Hooghly																	
	Burdwan	Burdwan	802	802	+008	S	120	93.6	77.4	91.4	78.4	85.1	—0.2	84.9	77	8.0		
	Bankura																	
	Beerbhoom	Raniganj																
	West Burdwan																	
	Mooshedabad	Berhampore	854	821	+037	Variable	147.2	91.1	77.3	89.5	78.0	83.7	—1.0	85.4	84	9.7		
	Nudda																	
EAST BENGAL.	Jessore	Jessore	885	818	+012	Variable	168.2	92.4	74.1	90.3	77.9	84.1	—0.4	85.2	81	9.0		
	Khoolna																	
	Chittagong	Chittagong	861	890	+016	SE	130	88.1	73.0	85.6	76.6	80.0	—1.8	83.0	80	7.0		
	Chittagong Hill Tracts	Demagri																
	Backergunj	Barisal																
	Noakholly	Noakholly																
	Farrakpore	Farrakpore																
	Dacca	Dacca	869	844	+022	S	161	92.8	70.2	88.9	78.2	83.0	+0.1	85.1	72	7.4		
	Comillah	Comillah	827	802	—	Variable	?	85.6	74.8	82.2	77.0	79.6	—	82.4	83	8.3		
	Mymensingh	Mymensingh	837	—	—	E	185	92.3	70.1	89.0	77.9	83.5	—	84.3	78	7.9		
	Bogra and Pubna	Serajgunj																
NORTH BENGAL.	Rajshahy	Ranpore Beaulah	843	819	—	Variable	316	104.6	70.6	93.2	78.1	85.7	—	84.6	81	6.4		
	Dinagepore	Dinagepore	816	—	—	Variable	147	91.1	75.1	89.2	77.7	83.4	—	84.8	70	6.4		
	Rangpore	Rangpore	895	—	—	SE	123	91.8	64.6	87.9	74.7	81.4	—	83.5	82	7.1		
	Julpigoree	Julpigoree	823	—	—	?	161	91.0	75.1	86.2	76.2	81.2	—	80.0	86	8.0		
	Cooch Behar																	
	Darjeeling Hill Districts	Darjeeling	22.917	—	—	E	79	68.0	—	65.6	—	—	—	61.7	96	9.1		
	Purneah	Purneah	867	833	—024	Calm	31	92.7	73.4	89.0	77.4	83.5	—0.6	83.6	81	6.1		
SOUTH BENGAL.	North Bhagulpore																	
	Moosufferpore	Durbhunga	406	832	+024	ESE	130	91.4	77.6	87.3	78.9	83.1	—1.3	83.0	86	6.7		
	Durbhunga																	
	Chumparun	Motihari	—	—	—	SE	—	80.1	—	87.8	—	—	—	86.1	76	1.1		
	Sarun	Chupra	—	—	—	ESE	37	94.5	74.5	93.7	77.0	85.4	—	84.6	97	6.0		
	Shahabad	Dehree	29.350	29.607	—	?	?	83.4	69.0	89.0	73.9	81.7	—	83.2	70	0.4		
		Huzar	346	—	—	—	154	96.9	75.8	93.0	79.0	86.3	—	87.4	72	4.4		
NORTH BENGAL.	Gya	Gya	818	803	+015	Variable	45	97.3	78.8	95.6	75.2	85.4	—1.7	87.1	71	6.7		
	Patna	Bankipore	438	821	+040	ENE	113	95.5	76.7	92.0	79.7	86.8	—1.6	84.7	83	6.7		
	South Bhagulpore	Bhagulpore	467	810	—	NE	93	91.4	76.0	89.0	77.9	83.5	—	84.1	81	6.4		
	Mouhlyr																	
	South Pargunnahs	Naya Doomka																
	Hazaribagh	Hazaribagh	27.610	29.501	+0.025	Variable	176	90.5	73.0	86.8	74.4	80.0	—0.5	81.6	74	9.4		
	Lohardugga																	
CHOTA NAGPUR.	Manbhoon																	
	Simlabhoon																	
		Chybazan																

Explanation of Summary.—The normal means of air pressure and temperature are the arithmetical averages or means of the readings during the week. The humidity of the atmosphere is expressed as a percentage, saturated air being represented by 100. A clear sky is denoted by 0 and an overcast sky by 100. The normal means of the rainfall are the numerical means or averages of the rainfall in that district determined from the returns sent in by the sub-divisions from that district, (i.e.) the total rainfall at the sub-divisional stations in the district sending in returns divided by the number of stations. A rain

for the week ending 29th June 1883.

Rainfall of week at observing station.	DISTRICT OBSERVATIONS.										Representative station.	DISTRICT.	METEOROLOGICAL DIVISION.
	RAINFALL.												
	Of week.		Since 1st of month.			Since 15th May.			Average number of rainy days during the week.	Normal number of rainy days of week.			
	Normal mean for district.	Average for district.	Mean for district.	Normal mean.	Variation.	Mean for district.	Normal mean.	Variation.					
4.06											Gopalpore	ORISSA.	
15.48	3.37	9.56	16.36	8.48	+6.88	16.01	10.00	+5.06	3.6	2.7	False Point		
6.01	3.36	8.56	11.04	8.35	+2.69	14.84	10.17	+4.67	5.3	2.6	Cuttack		Cuttack
4.29	2.52	6.20	13.52	7.20	+6.32	14.87	9.50	+5.28	4.8	2.6	Balasore		Balasore
2.00	2.74	3.21	8.86	9.39	-0.54	11.11	12.04	-0.93	4.7	3.2	Saugor Island	South-West Midnapore	SOUTH-WEST BENGAL.
0.57	2.32	3.03	6.55	9.42	-2.87	7.05	11.85	-4.80	4.0	3.4	Midnapore	South 24-Pargunnahs	
1.09	2.45	1.83	9.11	9.63	-0.52	10.15	12.70	-2.55	4.3	3.4	Calcutta	24-Pargunnahs	
3.65	2.20	1.86	8.21	8.73	-0.52	12.59	10.98	+1.60	4.0	3.2	Burdwan	Howrah	
	3.03	2.05	12.44	10.70	+1.65	15.14	12.42	+2.72	3.4	3.3	Raniganj	Hooghly	SOUTH-WEST BENGAL.
2.10	2.60	1.58	9.50	9.26	+0.24	13.72	11.71	+2.01	2.7	3.1	Barhampore	Burdwan	
	2.17	1.04	7.78	10.10	-2.37	11.12	13.55	-2.43	3.2	3.4	.....	Bankura
0.46	2.70	1.61	8.30	12.50	-4.14	10.73	10.11	-0.68	4.8	4.0	Jessore	Beerbhoom	
3.40	7.04	9.09	42.39	28.59	+13.80	50.51	33.93	+16.58	4.5	4.9	Chittagong	West Burdwan	SOUTH-WEST BENGAL.
	3.20	2.28	18.97	19.18	-0.21	20.53	23.22	-2.69	6.0	4.0	Demagiri	Moorsheadabad	
	5.05	3.56	14.83	20.34	-5.51	17.06	24.74	-7.78	5.5	4.8	Barrisal	Nadua	
	5.72	5.06	40.34	27.58	+12.76	43.17	33.43	+9.74	3.5	4.6	Noakholly	Jessore	
	3.22	2.12	7.27	12.75	-5.48	11.16	17.31	-6.15	4.7	4.2	Furzedpore	Khoolna	EAST BENGAL.
2.07	2.60	1.06	7.67	13.18	-5.51	10.85	17.88	-7.03	3.5	4.1	Dacca	Chittagong	
4.76	3.54	4.16	16.21	17.80	-1.59	21.14	22.20	-1.06	4.7	4.7	Commillah	Chittagong Hill Tracts	
1.30	3.13	1.08	9.16	16.58	-7.42	13.50	21.84	-8.34	5.2	4.8	Mymensingh	Backergunj	
	2.92	1.03	6.71	12.09	-3.38	13.89	10.11	-3.78	2.8	3.3	Serajgunj	Noakholly	EAST BENGAL.
1.26	2.00	0.74	8.22	10.43	-2.21	12.40	13.20	-0.80	4.0	3.4	Rampore Beaulah	Furzedpore	
3.31	4.04	1.76	10.80	15.31	-4.51	14.33	18.39	-4.06	4.7	3.3	Dinagore	Dacca	
3.44	5.48	3.23	13.96	21.16	-7.20	16.55	23.35	-12.00	4.8	4.1	Rangpore	Commillah	
14.42	8.80	9.81	25.06	32.05	-6.99	31.41	41.75	-10.34	5.4	5.5	Julpigoree	Mymensingh	NORTH BENGAL.
3.07	11.20	10.27	34.76	35.43	+0.64	53.55	44.21	+9.34	6.5	5.7	Darjeeling	Bogra and Pubna	
2.2	8.00	7.86	22.98	10.83	+12.15	24.14	13.13	+11.01	3.6	2.8	Purneah	Julpigoree	
2.08	2.15	1.27	15.11	7.01	+8.10	15.95	8.19	+7.76	2.8	2.7	Durbhunga	Cooh Behar	
0.20	3.31	0.86	4.76	3.57	+3.81	6.56	9.00	-2.44	2.7	2.8	Motihari	Darjeeling Hill Districts	SOUTH BENGAL.
5.28	2.88	3.06	9.73	6.46	+3.27	9.86	7.36	+2.50	2.5	2.7	Caupra	Purneah	
2.65											Dahree	North Bhawalpore	
0.64	2.51	2.16	7.35	5.09	+2.26	7.80	5.53	+2.24	2.4	2.8	Buzar	Mozufferpore	
0.53	2.11	1.39	10.28	5.07	+5.21	11.30	6.33	+4.97	3.0	2.8	Gya	Durbhunga	NORTH BENGAL.
1.62	2.55	1.33	10.57	5.09	+10.88	16.03	6.99	+9.04	2.3	2.7	Bankipore	Chumbarun	
1.55	2.27	2.02	10.88	6.38	+4.50	11.77	7.70	+4.01	3.4	3.0	Bhagulpore	Saran	
	2.40	1.00	11.15	6.06	+2.19	13.00	10.66	+2.43	3.3	2.6	Nya Doomba	Shahabad	
0.73	2.03	0.79	6.06	7.88	-1.22	7.54	0.59	-2.05	2.7	3.6	Hazaribagh	South Bhawalpore	CHOTA NAGPORE.
	2.73	1.33	10.56	7.54	+3.02	12.14	8.91	+3.23	4.3	3.6	Ranchee	Monghyr	
	2.56	2.06	6.24	11.91	-3.67	7.85	14.16	-6.31	4.0	3.7	Chyobassa	Southal Pargunnahs	
												Manbhoom	

period for the past 12 years. The variations are negative when the mean for the week is less than the corresponding normal mean and positive when greater. by 10. The number denoting cloud amount represents the part of the sky covered, the whole sky being denoted by 10. Under the head "district observational station" for the period in question during the past 12 years. The "means for the district" are the numerical averages of the rainfall returns received day is one on which at least an hundredth of an inch fell.

Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 29th of June 1883.

Meteorological division.	District.	Station.	RAINFALL.							Total.		Total rain- fall from 1st to 29th June.	Average total rain- fall from 1st to 29th June.	Total rain- fall since 15th May.	Average rainfall from 15th May to date.
			Saturday, 23rd June.	Sunday, 24th June.	Monday, 25th June.	Tuesday, 26th June.	Wednesday, 27th June.	Thursday, 28th June.	Friday, 29th June.	Number of rainy days.	of Rainfall week.				
ORISSA	Purba	Purba	.....	.....	0'07	0'80	.....	0'59	0'44	8	10'83	16'29	7'98	16'64	8'70
		Khurda	.....	.....	0'07	0'85	.....	0'50	0'44	8	10'83	17'32	9'15	17'07	11'45
		Banpur	.....	.....	0'03	0'33	0'34	0'42	0'42	5	4'09	7'44	9'15	8'46	10'27
		False Point	.....	.....	0'03	.....	0'20	0'04	0'39	4	18'75	17'97	7'71	10'43	9'83
	Cuttack	Jagatsingapore	.....	.....	0'09	1'43	0'02	1'79	0'61	6	9'14	10'63	6'61	24'77	8'07
		Cuttack	0'20	.....	.....	.....	0'02	2'70	3'60	4	6'52	12'52	7'84	15'23	11'36
		Kendrapara	.....	0'20	.....	.....	.....	0'02	3'60	4	6'52	12'52	7'84	15'23	11'36
		Jajpore	0'28	.....	1'10	0'30	0'10	2'84	1'08	6	6'02	9'69	9'38	14'11	11'76
	Balasore	Chandbali	.....	1'50	.....	1'10	2'25	3'25	.....	4	8'10	14'55	6'30	14'78	7'91
		Bludhruck	.....	3'38	.....	.....	1'31	1'74	0'83	4	7'40	13'03	6'51	14'78	11'45
		Sorah	0'64	.....	0'13	.....	0'22	1'50	1'60	5	4'08	11'67	6'77	15'30	8'74
		Balasore	.....	1'12	.....	0'57	0'04	0'04	2'05	5	5'52	12'05	6'09	16'73	9'63
SOUTH-WEST BENGAL.	Midnapore	Jelaisore	0'10	0'12	0'20	0'10	0'22	3'40	5'00	7	5'14	16'34	6'66	16'00	8'00
		Haripodah	.....	0'10	.....	.....	0'23	1'12	1'60	4	3'14	9'09	9'09	11'07	11'07
		Contai	.....	.....	.....	0'06	0'47	0'76	3'74	4	5'05	9'85	9'15	14'18	11'47
		Sanger Island	0'18	.....	0'21	.....	1'00	.....	0'17	4	1'56	11'78	9'01	13'20	11'94
	24-Pergunnah	Tamluk	.....	.....	.....	0'40	0'30	0'20	2'40	4	3'00	6'70	8'86	7'60	11'53
		Midnapore	.....	0'10	.....	.....	0'03	0'27	2'30	4	2'79	6'02	9'44	6'38	11'55
		Ghatatal	.....	0'70	0'55	.....	.....	0'18	0'95	4	2'41	6'94	10'01	7'17	12'48
		Diamond Har- bour.	1'19	.....	0'21	0'15	0'21	0'65	0'62	6	3'03	4'93	10'01	8'96	12'72
	Howrah	Alipore Jail	.....	.....	0'81	.....	0'38	0'05	1'20	4	2'04	8'01	10'11	0'06	13'06
		Barrackpore	.....	.....	1'19	.....	0'20	0'08	0'08	3	2'07	0'30	10'82	10'72	13'24
		Dum-Dum	0'02	.....	0'14	.....	0'17	0'07	0'70	5	1'16	8'49	8'93	13'16	13'16
		Banaset	.....	0'19	.....	.....	0'18	0'72	1'24	3	1'09	8'66	9'62	9'89	12'75
	Hooghly	Buseerhat	1'03	.....	.....	.....	0'24	0'18	1'24	4	2'08	12'26	10'23	13'90	14'47
		Howrah	.....	0'35	0'13	0'49	0'31	.....	1'18	5	2'16	8'50	10'76	9'27	12'37
		Mohesra	.....	0'31	0'07	0'05	0'28	0'20	1'00	6	1'01	7'00	9'34	8'37	12'89
		Serampore	.....	0'14	0'85	.....	0'04	0'04	0'83	5	1'05	10'62	9'54	10'98	11'90
	Burdwan	Hooghly	.....	0'15	.....	0'08	0'03	0'24	0'41	5	0'91	7'00	8'81	10'37	11'71
		Jehanabad	0'03	0'38	.....	.....	.....	0'73	.....	3	1'09	8'99	9'48	9'90	12'61
		Culina	.....	.....	0'50	.....	0'03	0'30	.....	3	0'92	7'77	8'44	11'53	10'50
		Burdwan	2'54	.....	0'16	.....	0'07	0'04	0'57	5	3'07	11'32	7'09	14'24	10'78
	Bankura	Culwa	.....	.....	0'21	.....	0'30	0'10	0'09	4	0'70	5'66	9'76	12'15	11'05
		Ranagunge	2'35	.....	.....	.....	0'30	.....	.....	2	2'05	18'58	7'76	22'48	9'50
		Bankura	0'14	.....	.....	.....	0'13	0'15	0'60	4	1'03	6'34	9'74	7'68	11'99
		Bishenpore	.....	.....	.....	.....	0'13	0'11	0'30	2	0'81	10'75	11'09	13'09	13'09
	Beerbhoom	Mahara	3'70	0'10	.....	.....	0'27	0'10	.....	4	4'23	11'08	11'01	18'55	12'00
		Khatra	0'25	.....	.....	.....	2'20	0'07	0'65	4	3'37	8'00	12'16	10'84	13'72
		Bh. Soory	0'62	0'02	.....	0'50	0'29	0'09	0'03	6	1'04	18'70	10'03	22'55	11'64
		Hetampore	.....	.....	.....	.....	0'55	0'07	.....	2	0'02	8'00	12'81	11'07	14'39
	Nuddes	Bonong	.....	.....	.....	.....	.....	0'70	.....	1	0'70	8'75	10'74	10'88	14'13
		Ranaghat	0'11	.....	0'00	.....	.....	0'00	0'25	4	1'02	10'45	9'30	12'56	11'01
		Kishanghur	.....	0'16	0'20	.....	.....	0'11	.....	3	0'52	3'63	9'20	6'30	11'23
		Chowadanga	.....	.....	1'19	.....	0'20	.....	.....	2	1'39	4'01	9'86	7'30	14'43
	Khoolna	Mohesra	0'34	0'08	0'06	.....	0'04	0'03	.....	5	0'75	7'80	10'02	12'82	12'82
		Koontes	.....	1'20	.....	0'01	.....	0'31	0'32	4	1'57	11'58	11'45	16'79	15'37
		Satkira	0'18	0'05	.....	.....	0'10	0'39	1'20	5	1'02	10'05	12'06	13'01	15'37
		Bakhat	.....	.....	.....	.....	0'17	0'02	0'53	6	3'03	11'60	11'90	12'73	15'27
	Jessore	Khoolna	0'60	.....	0'21	0'10	0'02	0'53	1'51	6	3'03	11'60	11'90	12'73	15'27
		Narail	0'43	0'40	.....	.....	0'10	.....	0'41	4	1'42	5'50	11'09	11'79	15'49
		Jhenidah	.....	0'60	.....	0'04	0'04	0'10	0'78	5	1'05	6'01	12'01	14'10	16'04
		Magoorah	0'68	.....	0'53	.....	0'20	0'10	0'19	5	1'68	9'80	10'91	12'08	15'30
	Moorshedabad	Kandi	2'40	.....	.....	.....	0'20	.....	0'07	3	3'17	9'60	9'83	15'43	12'10
		Rampore Hau	1'01	.....	.....	.....	0'63	.....	0'04	3	2'69	15'25	9'00	10'54	11'53
		Berhampore	.....	.....	.....	1'14	0'36	.....	0'08	3	2'18	8'37	9'88	18'02	12'70
		Lalbagh	.....	.....	.....	1'09	.....	.....	.....	1	1'09	7'30	8'36	11'45	11'45
	Chittagong	Aringunge	0'44	.....	.....	0'70	0'02	0'02	.....	4	1'18	9'14	9'03	14'17	14'17
		Jungipore	.....	.....	.....	0'08	.....	0'05	.....	2	0'18	9'14	8'03	13'35	13'35
		Lalga	0'21	.....	.....	0'40	.....	0'04	.....	3	0'74	8'04	8'37	12'23	11'41
	
EAST BENGAL.	Chittagong	Cox's Bazar	.....	.....	0'12	0'12	0'46	4'91	4'91	4	11'61	46'20	39'83	59'58	39'58
		Chittagong	.....	.....	0'20	0'01	0'05	0'21	4'91	5	6'43	37'11	27'47	46'30	28'26
		Ranamat	0'12	.....	0'10	0'15	0'37	0'17	1'57	6	2'28	18'80	18'03	21'33	23'48
		Agartola	.....	0'04	0'33	0'02	0'02	2'50	0'35	4	5'05	14'84	18'85	19'16	22'07
	Backergunge	Patuakhali	.....	0'05	0'40	.....	0'05	1'35	1'40	5	4'45	17'10	23'40	19'60	28'48
		Porosopore	0'74	0'12	0'34	.....	0'11	0'08	2'10	6	4'39	13'63	19'20	14'58	19'49
		Burruai	0'07	0'02	0'17	.....	0'25	0'04	0'57	6	2'02	10'18	16'24	14'77	20'00
		Bhola	0'37	.....	0'21	.....	0'05	1'03	1'75	5	3'39	18'46	25'41	21'01	26'39
	Noakhali	Noakhali	.....	0'39	.....	.....	0'72	0'04	0'10	4	5'19	34'02	30'07	41'17	32'20
		Fenny	.....	.....	.....	.....	.....	0'10	4'30	4	5'19	34'02	30'07	41'17	32'20
		Madaripore	.....	1'11	.....	.....	0'78	0'82	0'79	4	3'50	6'94	12'01	11'00	17'72
		Furreedpore	0'40	.....	.....	.....	0'50	0'16	0'20	4	1'32	5'25	12'01	9'59	17'90
	Dacca	Goalundo	0'51	0'15	0'03	.....	0'27	0'10	0'10	6	1'35	9'74	12'38	12'90	10'25
		Munshigunge	.....	.....	.....	.....	0'03	0'21	0'73	3	1'80	7'47	10'30	10'15	21'41
		Dacca	.....	.....	.....	.....	1'08	0'27	0'39	3	2'34	8'71	13'51	11'37	18'28
		Manickgunge	.....	0'31	.....	.....	0'76	0'16	0'25	4	1'08	6'10	9'79	8'07	13'98
	Comilla	Comilla	.....	0'30	0'40	0'11	0'30	0'02	2'40	6	4'48	30'73	14'12	21'34	25'46
		Chandpur	.....	0'45	0'25	.....	1'75	2'05	.....	4	4'50	14'65	22'44	14'50	25'40
		Brahmanbaria	0'03	.....	0'15	.....	1'00	0'30	1'15	5	2'03	7'71	10'56	10'00	30'07
	
	Mymensingh	Kishoregunge	.....	.....	0'08	.....	.....	0'21	.....	3	1'45	8'87	14'72	15'48	18'09
		Atna	.....	0'61	0'42	.....	0'12	0'35	0'40	7	1'25	9'44	18'28	11'04	20'50
		Mymensingh	0'17	0'12	0'10	0'09	0'12	0'35	0'40	7	1'25	9'44	18'28	11'04	20'50
		Jamshaid	0'47	.....	.....	.....	0'50	0'07	0'10	4	1'14	8'47	14'20	10'86	19'00

Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 29th of June 1883—concluded.

Meteorological division.	District.	Station.	RAINFALL.							TOTAL.		Total rain-fall from 1st to 29th June.	Average total rain-fall from 1st to 29th June.	Total rain-fall since 15th May.	Average rainfall from 15th May to date.
			Saturday, 23rd June.	Sunday, 24th June.	Monday, 25th June.	Tuesday, 26th June.	Wednesday, 27th June.	Thursday, 28th June.	Friday, 29th June.	Number of rainy days.	Rainfall in inch.				
NORTH BENGAL	Pubna	Pubna	0.05	0.25	.....	.....	0.55	.....	0.41	4	1.26	9.31	11.37	13.48	15.25
		Serajunge	.....	.....	.....	.....	.....	0.50	0.08	2	0.58	8.69	10.69	12.18	14.95
	Bogra	Sherpore	.....	.....	.....	.....	0.57	0.05	0.06	3	0.68	5.35	11.61	8.18	16.77
		Nowkhilla	.....	0.19	.....	.....	0.13	0.22	0.08	4	0.62	6.44	12.70	8.83	16.17
		Bogra	0.35	0.32	0.06	.....	0.02	0.23	.....	5	0.98	7.31	13.60	10.28	18.08
		Panchbibi	.....	.....	1.50	.....	.....	.....	.....	1	1.50	9.63	11.28	12.30	15.08
	Rajshahye	Beaulah	0.21	0.61	.....	.....	0.03	0.03	0.04	5	1.12	6.30	9.69	9.31	12.60
		Nattore	.....	.....	.....	.....	.....	.....	.....	1	Nil	3.85	10.45	9.13	13.80
	Maldah	Maldah	0.00	0.02	0.23	0.33	0.03	0.39	0.02	7	1.11	9.60	11.10	11.68	13.11
		Dinapore	0.38	.....	0.33	.....	0.09	.....	.....	3	0.80	6.22	17.45	8.97	20.75
	Dinapore	Churamon	.....	0.21	0.71	0.21	0.07	.....	.....	5	1.30	11.30	13.30	13.60	14.57
		Raigunge	.....	0.55	0.40	0.07	.....	0.12	0.07	5	1.46	12.47	16.22	14.14	19.13
		Dinapore	0.08	1.95	1.21	0.19	.....	0.02	0.04	6	3.49	12.91	16.24	15.97	20.03
	Rungpore	Rhawangunge	1.07	0.97	.....	.....	0.01	.....	0.01	5	2.14	15.04	15.21	21.51	26.07
		Rungpore	0.21	2.00	0.67	0.96	.....	0.06	.....	5	3.80	10.28	18.63	17.23	25.41
		Kurigram	0.35	0.57	0.15	0.30	.....	0.30	.....	5	1.67	15.13	22.07	22.72	30.60
		Baginagra	.....	1.79	1.69	2.06	.....	.....	0.05	4	6.40	17.69	28.47	23.16	37.37
	Julpigore	Julpigore	2.92	6.50	1.76	1.92	.....	.....	.....	4	13.10	33.65	27.80	61.26	84.95
		Cooch Behar	.....	0.70	0.65	3.04	.....	.....	0.15	4	4.6	13.57	32.20	23.60	45.48
	Cooch Behar	Cooch Behar	0.13	0.14	2.73	5.74	.....	0.30	0.18	6	9.22	24.40	37.68	35.10	44.99
		Mokligunge	1.61	1.22	4.73	1.62	.....	0.11	0.09	6	9.73	24.26	36.11	31.75	40.70
		Matubhanga	3.2	2.52	2.62	3.73	0.01	0.16	0.17	7	12.43	33.20	34.0	40.53	45.25
	Darjeeling Hill.	Buxa	3.78	5.33	3.85	2.14	0.46	.....	.....	5	15.54	40.25	47.02	51.33	61.52
		Darjeeling	0.78	0.38	1.04	0.58	0.40	.....	1.82	6	6.00	38.69	22.94	61.77	36.69
NORTH BENGAL	Purneah	Kisakung	.....	0.17	5.25	4.20	.....	.....	.....	3	5.62	22.03	15.04	21.71	18.60
		Arranah	0.37	0.50	7.04	4.05	.....	.....	.....	4	11.66	28.82	12.91	29.68	15.64
		Purneah	0.10	.....	0.63	0.31	.....	0.01	0.12	5	1.17	10.10	11.87	11.35	13.84
	North Bhagulpore.	Madhapore	.....	.....	10.20	0.25	.....	0.10	0.25	4	11.00	29.51	0.80	40.21	8.74
		Sonpool	.....	.....	5.30	0.26	.....	.....	.....	2	5.56	23.72	8.29	24.57	9.73
	Durbhanga	Tajpore	1.10	.....	.....	0.05	.....	0.05	.....	3	1.23	14.19	0.86	14.90	7.31
		Durbhanga	0.08	0.03	1.32	.....	0.05	.....	.....	4	2.08	19.10	0.86	14.90	7.31
		Madhubani	0.10	.....	.....	.....	0.51	0.19	.....	3	0.80	14.30	7.11	16.07	8.28
	Mozufferpore	Sitamarhi	0.10	.....	.....	.....	0.13	.....	.....	2	0.13	7.32	8.05	9.01	9.46
		Mozufferpore	1.95	0.35	.....	.....	0.34	.....	.....	3	2.64	20.04	6.47	30.82	7.94
		Hajipore	.....	.....	.....	0.40	0.05	.....	.....	2	0.45	16.66	9.06	15.72	6.55
	Chumpran	Motihari	0.15	.....	.....	.....	.....	0.03	0.01	3	0.19	6.18	8.34	6.91	9.71
		Bettiah	0.00	.....	.....	0.04	.....	.....	.....	2	0.10	4.74	4.74	5.07	10.36
		Gopalgunge	.....	.....	0.81	0.25	0.30	.....	.....	3	1.36	4.30	9.00	6.21	8.38
		Sewai	.....	.....	1.08	1.08	0.67	.....	.....	3	2.81	7.63	7.63	7.63	8.40
		Ohuprah	.....	.....	.....	3.29	0.07	.....	.....	2	3.36	11.87	5.08	11.87	6.31
SOUTH BENGAL	Shahabad	Buxar	.....	.....	0.35	0.01	0.21	.....	.....	3	1.17	7.04	4.30	7.83	5.01
		Dehree	0.50	.....	.....	2.40	0.05	.....	.....	3	2.95	.....	.....	.....	.....
		Bhubanah	.....	.....	.....	0.40	.....	.....	.....	1	0.40	2.10	5.30	3.00	5.10
		Sasseram	0.25	.....	.....	2.22	.....	.....	.....	3	2.91	4.73	8.21	8.21	8.21
	Gya	Arrah	.....	.....	1.65	2.20	0.04	.....	.....	2	3.85	11.62	5.38	11.68	6.16
		Arrah	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Arrah	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Gya	Arrah	1.50	.....	0.08	1.01	.....	.....	.....	3	3.05	8.38	4.81	1.00	5.71
		Gya	0.04	.....	.....	0.18	0.01	0.10	.....	4	0.53	14.57	5.31	16.46	6.72
		Nowadah	0.11	.....	.....	0.19	0.69	.....	.....	3	0.99	8.97	0.43	8.14	7.60
		Jahanabad	.....	.....	0.45	0.50	.....	.....	.....	2	1.01	11.32	4.71	11.33	5.80
	Patna	Patna	0.07	.....	.....	0.65	.....	.....	.....	2	1.02	14.77	0.59	14.72	8.02
		Dinapore	0.10	.....	.....	0.85	.....	.....	.....	2	0.95	11.05	6.18	11.10	7.09
		Behar	0.02	.....	.....	0.80	.....	.....	.....	2	1.45	20.05	5.40	26.05	7.90
		Barh	.....	.....	0.02	1.22	0.02	.....	.....	3	1.20	14.39	4.53	14.44	5.89
	Monghyr	Begooerai	.....	.....	2.85	.....	0.63	.....	.....	2	3.48	18.75	5.30	30.70	6.69
		Monghyr	0.50	.....	0.30	0.05	0.34	.....	.....	4	1.19	8.82	0.00	10.14	6.69
	South Bhagulpore.	Janui	2.23	.....	0.10	1.16	.....	.....	.....	3	3.49	0.73	0.00	6.85	7.15
		Janui	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	South Bhagulpore.	Bhagulpore	0.00	.....	0.71	.....	0.26	0.02	0.02	5	1.13	14.05	6.63	15.41	8.12
		Banks	0.12	.....	.....	0.15	0.53	.....	.....	3	0.80	6.57	7.39	8.77	8.13
		Banks	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Banks	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Banks	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	South Bhagulpore.	Rajmehal	.....	.....	1.05	0.04	0.25	.....	.....	3	1.32	7.86	10.12	8.90	12.61
		Gonda	.....	.....	.....	0.31	0.16	.....	.....	3	0.53	6.47	7.25	8.22	8.60
		Pakour	.....	.....	.....	0.45	0.20	0.70	.....	3	1.55	17.21	10.29	21.53	11.87
		Nya Doonka	0.13	.....	.....	.....	0.02	.....	0.01	3	0.78	13.75	9.01	15.11	10.88
		Doonka	0.11	.....	.....	0.14	0.33	0.06	0.18	5	0.83	11.37	6.11	11.06	6.80
CENTRAL NAGALAND	Hasaribagh	Hasaribagh	0.07	.....	.....	.....	0.59	.....	0.00	3	0.75	7.94	8.44	8.30	10.06
		Hasaribagh	0.13	.....	0.43	0.19	.....	.....	0.13	4	0.80	6.57	8.11	7.05	7.05
		Hasaribagh	.....	.....	.....	0.60	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Lohardugga	Ranebi	0.18	.....	0.77	0.38	0.00	.....	0.31	5	1.70	12.34	7.73	11.50	9.24
		Lohardugga	.....	.....	0.10	0.60	0.32	.....	.....	3	1.07	.....	6.70	.....	6.40
	Singbloom	Chyebessa	0.15	.....	.....	0.87	.....	0.32	1.24	4	2.08	6.24	8.63	7.55	10.04
		Chyebessa	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Manbloom	Manbloom	0.70	.....	.....	.....	0.52	0.50	0.29	4	1.90	13.86	8.54	14.80	9.54
		Manbloom	0.12	.....	.....	.....	0.10	0.05	0.11	4	0.35	7.01	8.06	8.55	9.23
		Manbloom	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Manbloom	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Explanation: Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If some of the returns are missing, the corresponding spaces in the total rainfall columns are left blank.

SUMMARY OF METEOROLOGICAL AND RAINFALL OBSERVATIONS TAKEN IN BENGAL FOR THE WEEK ENDING FRIDAY, 29TH JUNE 1883.

The chief feature of the meteorology of the past week has been the formation of another cyclonic vortex, which has given heavy rain to Orissa and the adjacent districts of South-West Bengal. At the beginning of the week under review pressure was increasing, and considerably above the average. This accompanied a partial break in the rains; in other words, although ordinary monsoon winds continued, rainfall was local rather than general in character. Behar and North Bengal continued to receive fairly general rain. But in Orissa, South-West Bengal, and more especially in East Bengal, the rainfall was confined to local showers of short duration and generally limited in amount. This continued until Monday afternoon. On Tuesday morning the first indications were shewn of the commencement of the formation of a cyclonic vortex near the head of the Bay. The logs of ships already received shew that for one or two days previously weather had been squally, with strong monsoon winds and heavy rain over the centre and north of the Bay. The cyclonic vortex formed near the Sandheads and continued almost stationary until Friday morning, when it began to move to the westward. It crossed the Balasore coast about midnight, and was to the north of Cuttack, probably in the hill district of Northern Orissa at 10 A. M. of Saturday. The first effect of its formation was to diminish the wind amount and rainfall in Bengal and Orissa. Skies, however, began to cloud over in Orissa and South-West and East Bengal on Wednesday, and fairly general rain commenced over that area on Wednesday afternoon and continued for the remainder of the week. The rainfall was excessive in Orissa, more especially the central districts, and heavy in the south-western districts of South-West Bengal with the continuance of the indraught. Skies were less clouded in North and Central Bengal and North Behar, and the rainfall there during the last three days of the week was small in amount and local in character.

The variations in the elements of meteorological observations have, as a consequence, been considerable. The mean pressure of the week is above the average by small amount, except for Orissa and the south-west districts of South-West Bengal, where the defect ranges from zero to $\cdot 05$ ". The mean temperature of the week was generally below the average by small amounts, averaging 1° for the Province. The highest temperature registered during the week was $97\cdot 2$ at Gya. The wind was variable in direction in South-West Bengal, Orissa, and Chutia Nagpur, in consequence of the influence of the cyclonic disturbance. In East Bengal south-east winds have prevailed, and in North Bengal and Behar easterly winds. The indraught to the cyclonic vortex increased from Tuesday until Friday evening, when unusually strong winds were blowing in South-West Bengal and Orissa. The greatest velocity of the wind at Saugor Island—40 miles per hour—from 3 P. M. to 5 P. M.

The following table gives a summary of the temperature and rainfall data for the past week :—

METEOROLOGICAL DISTRICT.	TEMPERATURE.						RAINFALL.									
	Highest observed during week.	Lowest observed during week.	Average for week.			Average mean of week above (+) or below (−) normal mean week.	Of week.			Rainy days.		Since 1st of month.		Since 15th May.		
			Of highest of each day.	Of lowest of each day.	Of mean for each day.		Average.	Normal average.	Variation.	Average number for week.	Normal average number for week.	Variation from week.	Average.	Normal average.	Average.	Normal average.
Orissa	94.4	70.0	88.1	78.6	83.4	−1.5	7.52	9.07	+1.55	4.5	2.6	+1.9	13.04	7.93	15.87	9.88
South-West Bengal	96.6	71.3	80.7	70.1	84.5	−0.8	1.86	3.57	−1.71	3.8	5.4	+0.4	10.50	9.19	13.72	2.80
East Bengal	92.8	75.0	80.4	77.2	81.8	−0.6	3.00	4.04	−1.04	4.7	4.6	+0.1	14.88	10.30	18.74	14.16
North Bengal	102.0	64.6	80.1	70.7	82.0	−1.3	3.42	5.83	−2.41	4.3	4.2	+0.1	15.35	20.00	20.61	24.01
North Behar	97.2	69.0	82.0	77.3	84.0	−1.7	3.42	5.78	+0.00	2.9	2.4	+0.6	10.00	6.02	17.38	27.76
South Behar	94.0	73.4	80.0	77.8	84.0	−0.9	1.57	2.46	−0.89	2.0	2.0	+0.0	9.07	7.44	10.01	9.22
Chutia Nagpur	90.0	72.6	80.8	74.4	80.0	−0.6	1.27	2.89	−1.62	4.0	3.0	+1.0	7.08	9.08	8.80	10.77

The rainfall of the past week has been very unequally distributed. Excessive rain was recorded in Orissa (more especially the northern districts) during the passage of the cyclonic disturbance across it. Heavy local falls of rain have occurred in the Purneah and North Bhagulpore districts of North Behar, the Julpigori district of North Bengal, and the Chitragong and Noakholly districts of East Bengal.

The rainfall has been in defect in all other districts. The deficiency is most marked in the central districts of North and East Bengal, and appears to be due mainly to lightness of the showers, as the number of rainy days is slightly in excess of the average over the Province.

Saturday, 23rd June.—The barometer had fallen rather rapidly during the past 24 hours in Orissa, East and South-West Bengal, and risen slightly in North Bengal and Behar. Pressure exceeded the normal by amounts varying from $\cdot 05$ " at Calcutta to $\cdot 11$ " at Fulshe Point. Temperature was increasing, and was normal or slightly in excess, except in South

and Central Behar, where the mean of the preceding 24 hours was 3° below the average. Light winds prevailed at the head of the Bay. Winds were normal in direction over the Province, but feebler than the average. The air was moister in Behar, Chutia Nagpur, and the northern districts of North Bengal, where skies were also overcast, and fairly general rain fell. Local showers occurred in Orissa, South-West and East Bengal. They were generally very light. Maliara (in Bankoora) received 3.76 inches, Burdwan 2.53 inches, and Kandy (in Moorshedabad) 2.9 inches.

Sunday, 24th June.—Pressure had altered very slightly, but somewhat irregularly during the previous 24 hours. Temperature continued to increase, and was now either normal or slightly above the average. Light to moderate southerly winds prevailed at the head of the Bay, and gave light monsoon winds over the Province. The air was considerably drier in Behar and Chutia Nagpur, and the sky less clouded than on the 23rd, except in North Bengal, where it was overcast. Heavy rain was falling in the northern districts of North Bengal. Julpigoree registered 6.56 inches, and Buxa 5.33 inches. Light local showers fell in East and South-West Bengal. Orissa received a few heavy showers. Bhuddruk (in the Balasore district) registered the largest fall, 3.34 inches. No rain occurred in Behar or Chutia Nagpur.

Monday, 25th June.—Pressure had increased over the Province, and was unusually high. It differed from the normal by amounts ranging from .09" at Durbhunga to .19" at Saugor Island. Temperature was slightly above the average. Light winds continued at the head of the Bay. Northerly winds were blowing in North Bengal in the morning. A considerable increase of humidity had again occurred in Behar. Skies were overcast in East and North Bengal and in Behar. Heavy rain fell in North Bengal and the eastern districts of North Behar. Muddapore and Sompool (in North Bhagalpore) registered 10.2 and 5.3 inches respectively, and Arrareah and Kissengunj (in Purneah) 7.04 inches and 5.25 inches respectively. Elsewhere light to moderate local showers were received.

Tuesday, 26th June.—Pressure began to give way over the Province. The fall was greatest at the head of the Bay, in the north-west of which an area of barometric depression and of cyclonic circulation began to form. Temperature increased slightly in Orissa and South-West Bengal, where the mean temperature of the preceding 24 hours was 3° above the average. Winds were light at the head of the Bay, and were backing through east to north. The air was very humid in North Bengal and Behar. The sky was less clouded, except in North Bengal, where it was overcast. The rainfall was unusually small in amount over Orissa, South-West and East Bengal, in consequence of the indraught to the cyclonic disturbance already established. Heavy general rain fell in the northern districts of North Bengal. Cooch Behar received 5.74 inches, Behar also obtained general rain. The largest amounts were registered in the Purneah and Shahabad districts.

Wednesday, 27th June.—Pressure continued to diminish rapidly. The fall of the barometer was greatest in South-West Bengal. The cyclonic vortex was more distinctly marked and was apparently to the south of Saugor Island and near the sandheads. Temperature was normal in Orissa, slightly in excess in Bengal, and from 1° to 3° below the average in Behar and Chutia Nagpur. Winds were everywhere light. In South-West Bengal and Orissa they ranged in direction between north east and north-west, and indicated convergence to the cyclonic disturbance at the head of the Bay. The air was less damp in Behar and North Bengal than on the 26th. The sky had clouded over in Orissa and the adjacent districts of South-West Bengal and Chutia Nagpur. Elsewhere it was free from cloud.

Light to moderate rain fell in Orissa, South West Bengal and in East Bengal. A few light showers were recorded in North Bengal and North Behar, and light general rain in the Sonthal Pergunnahs and Chutia Nagpur. The heaviest falls registered were 2.5 inches at Agartola and 2.25 inches at Chandbali.

Thursday, 28th June.—Pressure had again given way over the whole Province. The fall of the barometer was large everywhere and was greatest in the 24-Pergunnahs and Balasore. These changes intensified the cyclonic vortex, the position of which was unchanged. Pressure was now below the normal by amounts ranging from .05" at Patna to .25" at Calcutta. Temperature varied very slightly from the normal except in Orissa, where it was $2\frac{1}{2}^{\circ}$ below the average. The air motion was much stronger than on the 27th, and was mainly dependent on the cyclonic disturbance. In South and South-West Bengal winds ranged between east and north-east. They were north at Balasore, and west south-west at False Point. Light easterly winds prevailed in North Bengal, Behar, and Chutia Nagpur. Skies were overcast, and the air very humid in South Bengal and Orissa. The indraught from the north to the vortex had diminished considerably the amount of cloud and the humidity of North Bengal and Behar.

Moderate to heavy general rain fell in Orissa. Moderate rain was received in the whole of South-West Bengal and East Bengal. Light local showers fell at the majority of stations in North Bengal and at a few Behar stations. False Point recorded the large amount of 8.04 inches.

Friday, 29th June.—A rapid fall of the barometer in South-West Bengal and Orissa had accompanied a further intensification of the cyclonic vortex, which was in almost the same position as it had been during the previous 48 hours. Pressure had increased by moderately large amounts over the remainder of the Province, and varied from the normal within wide limits ranging from .01" at Durbhunga to .45" at Saugor Island. Temperature had fallen very rapidly. The mean of the previous 24 hours was from 5° to 10° below the average in Orissa, $3\frac{1}{2}^{\circ}$ in South-West and East Bengal, and $1\frac{1}{2}^{\circ}$ in Chutia Nagpur and Behar. Winds

were unusually strong. Little change has taken place in the direction of the winds, which continued to indicate convergence to a centre near the Sandheads. The air was almost saturated with moisture in East and South-West Bengal, and in Orissa where skies were overcast. In all other parts of the Province, except the western districts of North Behar, no sky was thickly clouded.

Orissa received excessive rain. Amounts exceeding 5 inches were registered at several stations. Pooree recorded 9.44 inches. South-West Bengal recorded general rain heaviest in the south-western districts. Contai recorded the largest amount, 3.76 inches. The rainfall was also general in East Bengal, and was excessive in the Chittagong and Noakhally districts. A few light local showers of little importance were recorded in North Bengal and Behar.

JORN ELIOT,

Meteorological Reporter to the Govt. of Bengal.

METEOROLOGICAL OFFICE, BENGAL,
The 3rd July 1883.

VITAL STATISTICS OF THE FIRST CLASS MUNICIPALITIES IN BENGAL FOR THE WEEK ENDING 16TH JUNE 1883.

DURING the week ending 16th June, the first class Municipalities in Bengal returned the birth and death-rates of 14.7 and 27.8 per 1,000, respectively, from among their population of 1,329,680 against 16.0 and 32.0 per 1,000, respectively, in the preceding week ending 9th June, showing a small decrease in the birth ratio with a large decrease in the death ratio. The highest birth and death-rates were returned by the following Municipalities:—

Births.			Deaths.		
		Ratio per mille.			Ratio per mille.
Comillah ..	..	30.8	Mozufferpore ..	..	62.0
Burdwan ..	..	29.0	Durbhanga ..	..	49.6
Chuprah ..	..	25.4	Patna ..	..	38.9
Durbhanga ..	..	23.6	Gya ..	..	38.3
			Purneah ..	..	34.6
			Comillah ..	..	30.8
			Bhagulpore ..	..	30.8
			Arrah ..	..	28.7
			Suburbs of Calcutta ..	..	28.3
			Chuprah ..	..	26.4
			Santipore ..	..	25.9
			Serampore ..	..	25.5
			Kishnaghur ..	..	25.0

The mortality from the several death-causes was as follows:—

			Ratio per 1,000 during weeks ending	
			16th June.	9th June.
Cholera ..	..	..	5.6	7.9
Small-pox ..	..	..	4	7
Fever ..	..	..	11.7	13.5
Bowel-complaints ..	..	..	3.1	4.6
Injury ..	..	..	3	3
Other causes ..	..	..	6.2	5.2

indicating that, in comparison with the preceding week, the severity of cholera, small-pox and fever had on the whole declined considerably.

While small-pox prevailed most severely only in Gya and fever in Purneah, cholera exhibited its utmost virulence in the following towns:—

					Ratio per mille.
Mozufferpore ..	..	..	..	..	24.3
Durbhanga ..	..	..	..	..	20.5
Arrah ..	..	..	..	..	11.9
Gya ..	..	..	..	..	10.9
Chuprah ..	..	..	..	..	10.7
Patna ..	..	..	..	..	7.1
Suburbs of Calcutta ..	..	..	..	..	5.4
Howrah ..	..	..	..	..	3.9

It will be noticed that the area of greatest suffering from the abovenamed diseases this week was the same as that in the preceding week.

The highest and lowest death-rates in relation to *Religion* and *Age* are shown below:—

According to Religion.

		Ratio per mille.
Hindus ..	..	28.9
Mahomedans ..	..	24.1
Christians ..	..	18.9

According to Age.

		Ratio per mille.
Infants (under 1 year) ..	..	196.1
Old men (60 years and upwards) ..	..	46.1
Children (1 and under 5 years) ..	..	43.5
Adults (of 10 and under 15 years) ..	..	15.3

The 2nd July 1883.

F. W. A. DEFABECK,
Officiating Sanitary Commissioner for Bengal.

Statement showing the Results of the Registration of Births and Deaths in the First Class Municipalities in Bengal during the week ending 16th June 1883.

[illegible]

[illegible]

F. W. A. DEFAECK,
Offg. Sanitary Commissioner for Bengal.

OFFICE OF SANITARY COMMISSIONER FOR BENGAL,
The 2nd July 1863.

Results of the Meteorological Observations taken at the Alipore Observatory from 24th to 30th June 1883.

Month.	Date.	Maximum in sun.	Number of hours of sunshine.	Mean pressure barometer at 32° Fahr.	TEMPERATURE.				HYGROMETRY.				WIND.		Rain.	WEATHER.
					Mean.	Maximum.	Range.	Minimum.	Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	Prevailing direction.	Miles recorded.		
1883.				In lbs.	°	°	°	°	°	Inches	°	%			Inches.	
June	24th	153.0	9	29.634	84.8	90.5	11.3	79.2	80.2	0.969	78.8	81	S and SSW	108	0.05	Cloudy, p.
"	25th	168.7	2	29.659	82.4	89.9	11.7	78.2	79.8	0.86	78.8	89	S and SSW	80	0.73	Cloudy, o, g, p, t.
"	26th	165.9	12	29.665	84.9	91.7	13.0	78.7	80.2	0.965	78.3	89	S and S by W	98	Nil.	Chiefly cloudy.
"	27th	150.8	6	29.453	83.2	90.3	11.6	78.7	79.6	0.958	77.9	84	SSW and E	169	0.83	Cloudy, p, d, lr.
"	28th	144.4	2	29.89	81.7	89.7	9.0	77.7	78.2	0.920	76.7	85	ESE and E	347	0.12	Cloudy, o, g, d, p.
"	29th	102.5	Nil	29.800	79.0	82.6	5.8	76.8	76.9	0.909	76.9	91	E, E by N, and ESE	467	1.24	Cloudy, o, g, d, p.
"	30th	125.0	"	29.529	80.8	85.3	8.9	76.4	78.0	0.920	76.7	87	ESE and SSE	203	0.85	Cloudy o, p, g, d.

The mean pressure of the seven days ...

The average pressure of the corresponding period for 24 years, S. G. Office ...

The total number of hours of sunshine of the seven days ...

The mean temperature of the seven days ...

The average temperature of the corresponding period for 24 years, S. G. Office ...

The extreme variation of temperature during the seven days ...

The maximum temperature during the seven days ...

The highest velocity of the wind in one hour during the seven days ...

The highest pressure of the wind on one square foot during the seven days ...

The mean relative humidity during the seven days ...

The average relative humidity of the corresponding period for 24 years, S. G. Office ...

The total fall of rain from 24th to 30th June 1883 ...

The average fall of the corresponding period for 24 years, S. G. Office ...

The total fall from 1st January to 30th June 1883 ...

The average fall of the corresponding period for 24 years, S. G. Office ...

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, and from observations made at 6h, 10h, 16h, and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 86 formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The direction of the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

o overcast, g gloomy, d drizzling rain, t thunder, p passing temporary showers, lr lightning reflection, strong wind.

JOHN ELIOT,

METEOROLOGICAL OFFICE, INDIA,
The 2nd July 1883.

For Meteorological Reporter to the Government of India.

Results of the Thermometrical Observations taken at the Meteorological Office,
Chowringhee, from 24th to 30th June 1883.

MONTH.	Date.	TEMPERATURE.				HYGROMETRY.				Rain.
		Mean.	Maximum.	Range.	Minimum.	Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	
1883.		°	°	°	°	°	Inches.	°	%	Inches.
June	24th	85.6	92.8	12.0	79.0	80.3	.864	78.1	78	Nil
"	25th	82.3	90.8	11.6	79.3	79.6	.876	78.6	88	0.58
"	26th	84.8	93.2	13.2	79.0	80.3	.875	78.6	81	1.33
"	27th	82.3	90.1	10.7	79.4	80.2	1.004	79.4	91	0.41
"	28th	81.0	87.0	9.2	77.8	79.0	.986	78.2	91	0.08
"	29th	77.7	84.8	8.0	76.8	77.3	.832	77.1	98	1.09
"	30th	79.8	84.3	7.0	77.3	78.3	.853	77.8	94	0.89

The mean temperature of the seven days ... 81.9
 The extreme variation of temperature during the seven days ... 16.0
 The maximum temperature during the seven days ... 92.8

The mean relative humidity during the seven days ... 89

The total fall of rain from 24th to 30th June 1883 ... 4.16

The mean temperature and humidity are obtained by applying to the mean of the 10h, 16h, and minimum readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA,
The 2nd July 1883.

JOHN ELIOT,
For Meteorological Reporter to the Govt. of India.

Errata in the Weekly Report from 29th April to 5th May 1883.

MONTH.	Date.	HYGROMETRY.							
		MEAN WET BULB.		VAPOUR TENSION.		DEW POINT.		HUMIDITY.	
		Erroneous.	Correct.	Erroneous.	Correct.	Erroneous.	Correct.	Erroneous.	Correct.
	30th	71.9	75.0	Inches. 0.673	Inches. 0.805	° 67.4	° 72.7	Per cent. 67	Per cent. 78
May	1st	71.8	76.8	.604	.876	67.0	75.2	63	83
"	2nd	70.6	78.5	.646	.921	74.2	76.7	74	82

Also read 80 instead of 75 as the mean relative humidity during those seven days.

JOHN ELIOT,
For Meteorological Reporter to the Govt. of India.

PUBLIC WORKS DEPARTMENT, BENGAL.

IRRIGATION BRANCH.

IRRIGATION OPERATIONS FOR THE OFFICIAL YEAR 1883-84.

Areas leased for Irrigation up to the end of April 1883.

Orissa.	District.	CAVAL.	Esti- mated full dis- charge.	Average discharge utilized in month.	Dis- charge utilized during month.	Approximate area of land under irrigation last year at same time.	Approximate area of land under irrigation during month.	DETAILS OF AREAS LEASED.										RAINFALL, 1883-84.	RAINFALL, 1882-83.	REMARKS.				
								Five years. Kharif.	Five years. All crops.	Khar- reef.	Rubbee- canal.	Bhadol.	Hot weather.	Total.	Grand Total.	During month.	Up to end of month.							
																					Acr.	Acr.	Acr.	Acr.
South- Western	Cuttack	Kendrapara Gouri Patnamondia High Level Taldanda, 1st Taldanda, 2nd Taldanda, 3rd Mithasong High Level, Sec- tion I High Level, Sec- tion III.	C. ft.	C. ft.	C. ft.	Acr.	Acr.	Acr.	Acr.	Acr.	Acr.	Acr.	Acr.	Acr.	Acr.	Acr.	Acr.	In.	In.	In.	In.	The kharif leases expired with the old cal year 1892-93.		
			1,299	297-50	100-30	190	746	69	69	50	69	69	69	69	69	69	69	69	69	1-09	1-09		1-09	1-09
			375-83	214-00	27-80	8	153	2	2	4	6	6	6	6	6	6	6	6	6	0-03	0-03		0-03	0-03
			1,043	158-50	13	287	153	67	67	1	68	68	68	68	68	68	68	68	68	0-03	0-03		0-03	0-03
			1,300	158-00	183	287	153	23	23	...	23	23	23	23	23	23	23	23	23	0-03	0-03		0-03	0-03
South- Western	Midnapore Howrah Panchkora Total Total of the corresponding period of last year.	Total	1,411	67	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Leases for 36,933 acres expired on the 31st March 1883.		
			522	10	...	...	...	140	...	...	...	...	...	...	...	...	...	...	...	...	...		...
		
		
		
Sone	Sahabad Patna Gya Total Total of the corresponding period of last year.	Total	4,513	783	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	No part of the discharge in the Ruzar division was utilized for irrigation during month. Main Western Canal series were closed from 6th to 16th April 1883.		
			1,256	71	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		...	...
			1,090	482	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		...	...
			1,466	71	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		...	...
		
Grand Total	Grand Total of the correspond- ing period of last year	Grand Total	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			
		
		
		

The 2nd July 1883.

O. F. S. NEILL, Major, M.A.C.,
Under-Secy. to the Govt. of Bengal, in the P. W. Dept.

Weekly Return of Traffic Receipts on Indian Railways.

EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 23rd June 1883 on 1,509 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TOTAL TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
For the week ...	236,361	Rs. A. P. 1,30,910 9 0	Mds. s. 28,40,308 10	Rs. A. P. 8,93,359 1 3	Rs. A. P. 21,643 15 9	Rs. A. P. 11,34,813 10 0	64,289	190,020	254,309
For 24 weeks of half-year ...	5,196,888	68,91,601 0 7	6,57,30,984 20	1,74,95,997 13 10	5,49,854 3 10	2,38,96,263 2 3	1,593,891	3,306,419	4,900,311
For 25 weeks ...	5,433,949	61,14,511 0 7	6,85,91,172 30	1,83,87,966 16 1	5,30,898 3 7	2,50,31,076 13 3	1,658,180	3,498,440	5,156,620
For the corresponding week of previous year ...	199,775	2,08,135 13 6	21,54,974 0	5,72,067 0 9	49,305 11 4	8,29,528 8 7	49,709	106,361	156,070
For the corresponding week of previous year ...	.....	136 4 2	.....	379 10 11	33 11 7	550 8 8	.....	.....	.....
For the corresponding date of year ...	4,977,944	69,43,304 8 9	6,96,37,774 30	1,89,72,776 12 3	5,79,224 6 5	2,44,93,202 11 4	1,348,023	2,986,796	4,334,819

EASTERN BENGAL RAILWAY.

Approximate Return of Traffic for week ended 23rd June 1883 on 206½ miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TOTAL TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
For the week ...	68,130	Rs. A. P. 37,485 0 0	Mds. s. 2,51,537 0	Rs. A. P. 41,350 0 0	Rs. A. P. 953 0 0	Rs. A. P. 82,768 0 0	8,108	6,333	14,441
For 24 weeks of half-year ...	1,350,789	8,42,129 0 0	71,83,377	14,80,310 0 0	14,193 0 0	23,46,638 0 0	167,292	212,787	380,079
For 25 weeks ...	1,612,898	8,80,584 0 0	74,16,914 0	15,33,660 0 0	15,146 0 0	24,29,400 0 0	175,386	219,072	394,458

The traffic for corresponding period of previous year was not recorded; it was embraced in that for 13 days ending 23rd June 1883.

Includes Rs. 250 on account of Revenue stores.

BENGAL PROVINCIAL RAILWAYS.

Weekly Statement of Traffic Receipts.

Name of Railway.	Length open.	RECEIPTS FOR WEEK ENDING		TOTAL RECEIPTS FROM 1st JANUARY		Total increase in 1883.	Total decrease in 1883.	Percentage of increase or decrease.
		20th May 1883.	18th May 1883.	To 20th May 1883.	To 18th May 1883.			
Northern Bengal	Miles.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs.	Rs.
... and ...	220	21,240 0 0	23,562 0 0	7,59,218 0 0	2,24,439 0 0	1,65,241 0 0	.....	+22
... and ...	156½	16,553 0 0	18,690 0 0	2,70,431 0 0	3,19,313 0 0	48,882 0 0	.....	+15
... and ...	63	2,223 0 0	5,217 0 0	30,898 0 0	1,14,144 0 0	44,246 0 0	.....	+63
... and ...	27½	1,376 0 0	1,637 0 0	28,227 0 0	33,194 0 0	4,967 0 0	.....	+17
Total ...	469	50,393 0 0	61,106 0 0	11,33,874 0 0	13,91,310 0 0	2,57,436 0 0	.....	+23

DAKSHINATILAK RAILWAY COMPANY, LIMITED.

Weekly Statement of Traffic Receipts.

Name of Railway.	Length open.	RECEIPTS FOR WEEK ENDING		TOTAL RECEIPTS FROM 1st JANUARY		Total increase in 1883.	Total decrease in 1883.	Percentage of increase or decrease.
		20th May 1883.	18th May 1883.	To 20th May 1883.	To 18th May 1883.			
...	...	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	...
...	...	9,721 4 7	8,509 14 6	1,30,200 13 0	1,02,298 7 5	4,907 5 5	.....	+31

c 1883.

GILLANDERS, ARBUTHNOT & Co., Agents.



SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, JULY 11, 1883.

OFFICIAL PAPERS.

Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.

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DRAINAGE OF THE KRISHNAGHUR MUNICIPALITY.

No. 721T—M, dated Darjeeling, the 29th June 1883.

From—COLMAN MACAULAY, Esq., Secretary to the Government of Bengal, Municipal Department,

To—The Commissioner of the Presidency Division.

I AM directed to acknowledge the receipt of your letter No. 29MM, dated the 14th ultimo, submitting a copy of a letter from the Chairman of the Krishnaghur Municipality, in which he reports that local subscriptions have been promised to an amount of Rs. 15,000 only towards the cost of the scheme for the improvement of the drainage of the municipality by excavating the bed of the Unjona khal. To meet the total cost of carrying out the project, which has been estimated at Rs. 1,15,000, the Municipal Commissioners request that a grant-in-aid of Rs. 50,000 be sanctioned from the Provincial Revenues, and that the balance of Rs. 50,000 be advanced to them as a loan to be repaid in 15 years. You are of opinion that the amount of local subscription promised is not creditable to the public spirit of the inhabitants, and you consider that such an appeal to the liberality of Government is out of place on the part of the Municipal Commissioners and the residents of the town, who have shown so little real desire to carry out a sanitary measure of vital importance to their well-being. You are therefore unable to recommend the proposal.

2. In reply, I am directed to say that the Lieutenant-Governor is unable to accept the proposals of the Krishnaghur Municipality. The contribution which they propose to make towards the cost of the project is altogether insufficient, and is incommensurate with the urgency with which the prosecution of this work was pressed upon the Government by the residents of the town and of

the district on the occasion of the Lieutenant-Governor's last visit to the station. Out of the estimated cost of the work, which appears to be very necessary for the sanitary improvement of the town and its neighbourhood, the Lieutenant-Governor promised to give, as a Government subsidy, half a lakh of rupees if the people were prepared to raise by subscriptions an equal amount, and to contribute the balance of Rs. 15,000 from the municipal resources. Mr. Rivers Thompson is prepared to abide by this promise, but he cannot go beyond it in view of the claims of other places upon Government, and the impossibility of burdening the public resources with any larger charge on behalf of the residents of Nuddea. If they cannot raise the required half lakh of rupees by subscription amongst themselves, the Municipal Commissioners should go into the open market for a loan. This is the course which has been adopted by the municipalities of Burdwan, Bhagulpore, and other places for the introduction of important municipal improvements, and there are no grounds for treating Krishnaghur exceptionally.

No. 29MM, dated Alipore, the 14th May 1883.

From—J. MONRO, Esq., Offg. Commissioner of the Presidency Division,
To—The Secretary to the Government of Bengal, Municipal Department.

WITH reference to this office letter No. 166Ct.MM, dated the 29th January last, I have the honour to forward herewith copy of a letter No. 394LF, dated the 3rd instant, from the Magistrate of Nuddea, furnishing certain information on the subject of the improvement of the river Unjona.

2. The outcome of the protracted discussion regarding the clearing out of the bed of the Unjona amounts to this, that the amount of local subscriptions promised is Rs. 15,000, that the cost of land will be nil, as that item will be defrayed by the landholders, and that the balance of one lakh is to be contributed by Government in the shape of a free gift of Rs. 50,000 and a loan of half a lakh.

3. This result is to my mind most disappointing in a place like Krishnaghur, which claimed such a prominent place amongst those towns which desired the boon of self-government. On the first occasion on which an opportunity has been afforded to the municipality of showing their public spirit, that body shows an unmistakeable inclination to abstain from all appearance of taxation to carry out a work of primary importance, and virtually makes an appeal *ad misericordiam* to Government.

4. I have not the names of the subscribers before me, and cannot therefore say how far the people themselves have come forward to carry out a work which all admit to be of vital importance to their well-being.

5. As regards the land (most of which belongs to the Nuddea Raj), it is questionable whether the Court of Wards has the power so to alienate lands. This point has recently been raised in another case, and it is doubtful whether we can legally make such a grant of land belonging to a ward's estate.

6. With regard to the loan proposed, the municipality say that they can afford to pay it off in 15 years. Nothing is said as to how they propose to defray the interest, or how they intend to create a sinking fund with which to wipe off the principal. It seems rather to be assumed that the loan will be given without interest, otherwise I fail to understand how it is proposed to pay off a loan of Rs. 50,000 bearing ordinary interest in 15 years by instalments of Rs. 4,000 per annum. If it is proposed that Government should give this loan without interest, then this scheme resolves itself into an application to Government for an annual gift of Rs. 2,000, calculating interest at 4 per cent.

7. It is also to be observed that the Municipal Commissioners do not propose to tax themselves in any way to pay for this boon. They merely propose to set aside Rs. 4,000 of their present limited and insufficient income, and curtail expenditure. That they will be able to do this without starving other departments and reducing other branches of their administration to a state of inefficiency, I very gravely doubt.

8. I cannot recommend Government to assent to the proposal as at present made. It seems to me that such an appeal to the liberality of Government is out of place on the part of those who have shown so little real desire to carry out an important sanitary work, except at other people's expense. I think it would be an extremely liberal offer if Government were to grant a

sum equal to what the people themselves subscribe, leaving them to find the balance by a loan raised in the public market, as has recently been done by the Burdwan Municipality. For this loan the municipality would have to pay, and I see no reason why Krishnaghur should have a scheme intended to benefit the town without payment.

No. 394LF, dated Krishnaghur, the 8rd May 1883.

From—W. V. G. TAYLER, Esq., Magistrate of Nuddea,
To—The Commissioner of the Presidency Division.

WITH reference to your No. 18MM, dated the 21st ultimo, regarding the improvement of the river Unjona, I have the honour to inform you that a sub-committee appointed by the municipality of Krishnaghur for the purpose of raising subscription for the Unjona excavation by their earnest appeal to the inhabitants have got promises to subscribe to the extent of Rs. 15,000. They have not attempted to realize the amount, because, as the carrying out of the scheme, involving as it does the outlay of more than a lakh of rupees, depends entirely upon the assistance which the Government is willing to give, it would be premature to realize the subscriptions unless the scheme be really undertaken. They have, however, every reason to believe that the amounts subscribed will be paid as soon as a favourable reply is received from Government.

2. The lands in the bed of Unjona principally belong to the estate of the Maharaja of Nuddea, and the manager on behalf of the Court of Wards has signified his consent to its appropriation for the purpose of the canal. The owners of the tanks, which are also situated within the bed, are also willing to make a similar concession, so that, if the scheme be undertaken, it is almost certain that no compensation will be claimed by the land-owners.

3. The Municipality of Krishnaghur will be able, by curtailing their expenses on other heads, to contribute annually the sum of Rs. 4,000 in order to liquidate a debt of Rs. 50,000, provided this amount be advanced as a loan by the local Government. This loan they propose to pay off in 15 years.

4. There will be still a deficiency of about Rs. 50,000 if the excavation be undertaken in the manner recommended by the Superintending Engineer. The Municipal Commissioners are unable to see their way towards raising such a large sum. They therefore pray that the amount may be given by the Government as a free gift for the purpose.

5. The Municipal Commissioners hope that the Commissioner of the Presidency Division will be pleased to lay these facts before His Honor the Lieutenant-Governor of Bengal, and to recommend that Rs. 50,000 be advanced as a loan, and Rs. 50,000 be granted from the provincial funds for the improvement which the Municipal Commissioners believe will add materially to the health and cleanliness of the town.

ANNUAL REPORT ON THE ADMINISTRATION OF CIVIL JUSTICE IN THE SONTHAL PERGUNNAHS FOR 1882.

RESOLUTION. JUDICIAL.

Darjeeling, the 30th June 1883.

READ—

The Annual Report on the Administration of Civil Justice in the Sonthal Pergunnahs for 1882.

Read also—

The Reports for 1880 and 1881, and the orders of Government recorded thereon.

The following statement shews the progress of litigation in the Sonthal Pergunnahs during the past three years:—

	INSTITUTED.			DISPOSED OF.			PENDING.		
	1880.	1881.	1882.	1880.	1881.	1882.	1880.	1881.	1882.
Suits for money or moveable property ...		7,000	7,850	6,027	7,367	7,832	921	617	695
Rent suits ...	10,994	4,307	4,643	4,496	4,424	4,602	795	467	378
Title do. ...		599	478		673	499		166	170
Execution suits for money or moveable property ...		4,070	4,444	3,077	3,625	4,633	537	904	719
Rent execution ...	5,403	2,743	3,362	2,334	2,603	3,126	306	434	615
Title do. ...		200	139		201	145		29	48
Total ...	16,397	19,015	20,812	15,924	18,905	20,336	2,559	2,907	2,461

Owing to the change in the form of the returns introduced in 1880, a regular comparison of the results of three consecutive years cannot be made until the receipt of the report for the current year. Nor can the results even then be strictly accurate, as it was only in September last that, under the orders of Government, final instructions were issued regarding the adoption of a uniform system of classification of revenue and title suits.

2. As compared with the preceding year, the number of suits for money or moveable property was 7,350 as against 7,086. The principal increase was in suits on bonds. The increase is attributed to the break in the rainfall in July and the two following months, to the anxiety of the people in consequence, and the inferiority of the rice crop which resulted from the break. The number of rent-suits instituted during 1882 was 4,515 as compared with 4,307 in the preceding year. The number of suits for arrears of rent in the Pakour sub-division increased from 46 in 1881 to 162 during 1882. The increase was due, it is said, to the Pakour zemindar, who is the owner of half the sub-division, having "gradually accepted and acted on the settlements with his tenants from whom he had hitherto kept aloof."

3. The Commissioner observes that the majority of the suits appearing hitherto under the head of rent-suits were really *jot* suits, that is suits in which the "tenants, for the time virtually proprietors, contended among themselves for possession of disputed plots." An interesting extract is given from the report of Mr. Oldham, the Deputy Commissioner, in which he explains the remedy which has been found for the sale of tenancy and ryoti rights which had sprung up as an effect of the settlement operations. Mr. Oldham points out that, under the action of the courts under Regulation III of 1872, the cultivators, when they required a loan, were able to mortgage their holdings at fair rates, when it seemed advantageous to sell them outright. The effects are thus described by Mr. Oldham:—"The first results with the unquestioned rise in credit seemed favourable enough; but a very short interval sufficed to shew that, where the borrowers were all Sonthals or members of the other primitive races, and the lenders were all keen-witted Bengalis and Beharis, and land was the security, that security was fast passing from the hands of its original clearers and cultivators into those of the creditors; while in most instances the original tenant was left as a labourer on the soil of which he had been, for a short period, and by the operation of an unexpected and fatal gift, the proprietor. And the last, and perhaps worst, feature of this change has been seen in those cases where it broke up altogether the old community, and where the village headman and his assessors have been deprived of power because of the intrusion of some foreigner, who has become master of large portions of the village land, and in whose debt they themselves deeply lie." Mr. Oldham then points to the contrast between the state of affairs where, in consequence of these transactions, there had been the "attending disruption of the communities, the loss of the village chief's position and the degraded status of the tribesmen," and the state of affairs in the Government estate—"regarded as the model zemindari of the district—where the integrity of the communes and the position of the tenantry have been maintained by prohibiting any transfers of land whatsoever, and by the exclusion of the Bengali and Behari land-speculating class." Every attempt has now been made, and with satisfactory results, to supervise closely all cases in which it is sought to favour the irresponsible treatment of his holding by a mere cultivator, and it is now sought to enlist, or at least to allow an opportunity for, the interference of the rent receiver or the landlord. Another important change has been effected in the execution of decrees, it being now held that the "zemindar," to whom notice of the attachment of the land in execution must be given, is not necessarily the proprietor who pays the Government revenue, but the "rent-receiver," and when the latter objects, the parties are required "to establish or contest the right to sell by separate suit." Sub letting has also, it is said, been rendered ineffective by the courts refusing to allow the recovery of rent at a higher rate than that fixed by the settlement. In order also to define the position of the village headman, who could not be prosecuted criminally for embezzling collections, and who appeared to be able to alienate his *nij-jote*, it was ruled during the past year that "as the existence of substantial *nij-jote* is the landlord's sole security for payment by the headman, no encumbrance of it since the settlements, or short of a Sonthal occupancy right (section 18, Regulation III of 1872) will prevail against the landlord, should the latter have to sell it for arrears, and the Deputy Commissioner will be ready to dismiss as inefficient any headman whose *nij-jote* had so been sold." These changes will, it is hoped, prove beneficial. Their effects on the suits during the current year should be carefully noted and recorded in the report which will be submitted after its close. The results, though the natural results of a power suddenly placed in

the hands of an ignorant people, are scarcely conducive to the objects of a settlement which contemplated the establishment of a strong peasant proprietary; and if the measures adopted by the local authorities do not tend to check the evil, it would be for consideration whether the rules in force in the Government estate against the right of transfer should not be generally enforced. It is impossible, at least, to deal with Sonthals as with more advanced communities.

4. The number of cases disposed of during the year was 20,336 as compared with 18,966 during the preceding year, and 15,924 during 1880, the number of cases pending at the close of the year being 2,461 as compared with 2,607 pending at the close of 1881, and 2,559 at the close of 1880. The increase in the amount of work done, and the decrease in the amount of arrears, is satisfactory.

5. The total number of appeals from decrees of civil courts for disposal during the year was 778 as compared with 634 in the preceding year. Of these 125 were rejected and 16 were dismissed in default, or were not prosecuted. Of the remaining 637, the original decisions were confirmed in 259, modified in 12 and reversed in 80; 242 cases were remanded and 44 were pending at the close of the year. To the Commissioner's court 57 appeals, including 3 revenue appeals, were presented; of these 6 were rejected, in 15 cases the original orders were upheld, in 7 reversed, and the remaining 29 were pending at the close of the year.

6. The Deputy Commissioner refers to the small receipts in the civil courts in proportion to the number of suits instituted in the Sonthal Pergunnahs, as compared with other parts of Bengal, and thinks that, though some obvious reasons exist, which in part account for the difference, it must be conceded that the courts do not receive their full dues owing to the absence of pleaders. He adds—"The scrutiny of valuation is left to the courts alone, and, however great their vigilance, it cannot be so great as that resulting from the rivalry of professional law agents." He also remarks that a great cause of difference in the receipts is the process system in force in the Sonthal Pergunnahs, and the procedure under which parties can serve their own processes free of cost. The question does not appear to the Lieutenant-Governor to be of much importance where there are the countervailing advantages secured by the special procedure and rules adopted in a backward tract of country like the Sonthal Pergunnahs. At the same time, though the scrutiny by the courts cannot, on account of the pressure of business, be as complete and accurate as that of legal practitioners, ready and anxious to find a flaw in the case of the opponents, still much might, the Lieutenant-Governor considers, be done with care and attention, and the Commissioner should impress on all officers in the Pergunnahs the necessity for a closer examination of the papers. It would do much to make this scrutiny effective if the Deputy Commissioner would himself examine some of the records from time to time to assure himself that the interests of the stamp revenue are not neglected.

7. The Lieutenant-Governor has much pleasure in again recording his appreciation of the manner in which Mr. Oldham performed his duties during the year, and regrets his unavoidable departure from a district of the conditions and circumstances of which he had gained an intimate knowledge. He also notices with satisfaction the favourable remarks on the conduct of the officers subordinate to the Deputy Commissioner. A copy of the remarks regarding the officers mentioned will be forwarded to the Appointment Department of this office.

ORDER—Ordered that a copy of this Resolution be forwarded to the Commissioner of Bhagulpore for information and guidance.

Ordered also that a copy of paragraph 7 of this Resolution, and of paragraphs 25 and 26 of the Report, be forwarded to the Appointment Department of this Office for information.

By order of the Lieutenant-Governor of Bengal,

F. B. PEACOCK,

Secretary to the Government of Bengal.

FINANCIAL DEPARTMENT—FINANCE.

Darjeeling, the 3rd July 1883.

RESOLUTION.

THE Lieutenant-Governor has already, in separate Resolutions, passed orders upon the estimates under the various heads of Provincial Services for 1883-84, and upon the estimates of such funds as are incorporated in the General Imperial Accounts. After these orders were issued, the Government of India, in its Financial Statement for 1883-84, prescribed certain modifications in the form of the estimates which it is incumbent upon the Local Government to follow. It is not necessary to explain at length the various changes made in the classification of the heads of receipts and charges, but opportunity will be taken to recast the revised estimates for 1882-83, and the estimates for 1883-84, in the form prescribed. It will not be convenient to follow the new classification in the accounts of the year 1881-82, nor is it desirable to disturb those accounts, as 1881-82 was the last year of the period for which the financial contract of 1877 had been made, and its accounts have already been closed.

ACCOUNTS FOR 1881-82.

2. The Accountant-General's final report on the accounts of 1881-82 has not yet been submitted. The preliminary issue shews the following results compared with the estimates for the year:—

				Estimate, 1881-82.	Regular estimate, 1881-82.	Actuals, 1881-82.
				Rs.	Rs.	Rs.
PROVINCIAL—						
Opening balance	...	...		49,01,000	49,91,000	49,91,000
REVENUE—						
Proper	...	...		3,08,28,000	3,73,03,000	3,76,22,000
Allotment from Imperial to Provincial	...	...		38,10,000	83,84,000	83,69,000
Contributions from Local to Provincial	...	...		2,000	2,000	1,30,000
Inter-provincial adjustments	...	...		.....	.....	.....
Total	...	...		4,06,40,000	4,56,89,000	4,61,30,000
GRAND TOTAL	...	...		4,55,41,000	5,06,80,000	5,11,21,000
EXPENDITURE—						
Civil	...	...		2,67,41,000	2,61,19,000	2,62,93,000
PUBLIC WORKS—						
Interest	...	...		37,69,000	33,71,000	33,61,000
Railways	...	...		26,40,000	32,16,000	30,34,000
Irrigation and Navigation	...	...		40,00,000	37,61,000	36,00,000
Other Public Works	...	...		67,50,000	66,31,000	66,87,000
Total	...	...		1,71,59,000	1,69,79,000	1,67,42,000
Contribution to Local Funds	...	...		1,95,000	3,33,000	3,66,000
Closing balance	...	...		14,46,000	72,49,000	77,20,000
GRAND TOTAL	...	...		4,55,41,000	5,06,80,000	5,11,21,000

3. In the Resolution of the 18th April 1882, it was shewn that the year 1881-82 had actually opened with a credit balance of Rs. 49,91,000; that the revenues under all heads might, during the year, amount to Rs. 3,73,03,000; that the Imperial allotments, including the special grant

of Rs. 28,50,000 made in pursuance of the new contract, and the restoration of Rs. 20,00,000, which had been contributed to the Imperial Treasury in the previous two years, would be Rs. 83,84,000; that the total expenditure during the year would probably not exceed Rs. 4,34,31,000, leaving a credit balance at the close of the year of Rs. 72,49,000. The actual result has been more favourable than this estimate by Rs. 4,71,000. The expenditure of the Public Works Department fell short of the estimate by Rs. 2,37,000; a sum of Rs. 1,39,000, representing the balance of the Estates Improvement Fund, has been added to the Provincial Services balance; and the receipts of the Public Works Department increased by Rs. 3,09,000. Against this there was a decrease of Rs. 15,000 under Imperial allotment; the sum of Rs. 2,000, estimated for contribution from local funds for the services of executive officers of the Public Works Department for supervising district works, has not been realized; the grants to Local Funds have increased by Rs. 33,000; and the operations of the Civil Department shewed a net result worse by Rs. 1,64,000, as exhibited in the following table:—

	Better.	Worse.
	Rs.	Rs.
Excise	...	1,29,000
Customs	...	...
Salt	15,000	9,000
Opium	...	13,000
Stamps	...	...
Registration	34,000	2,000
Minor Departments	...	20,000
Law and Justice	...	1,33,000
Police	...	...
Marine	42,000	...
Education	24,000	...
Medical	...	56,000
Stationery and Printing	17,000	...
Interest on Promissory Notes	57,000	...
Miscellaneous	1,000	...
Public Works by Civil Officers	75,000	...
Refunds	12,000	...
Land Revenue	...	89,000
Assessed Taxes	...	5,000
Administration	4,000	...
	14,000	...
Total	...	1,64,000

4. The accounts furnished by the Accountant-General shew that the Provincial balance on the 31st March 1882 was Rs. 75,43,000, which was less than that shewn above by Rs. 1,77,000. This amount represents the debit of Rs. 1,77,000 on account of Census operations. The Government of India, in the Home Department, has, however, in letter No. 34, dated 4th May 1883, accepted this charge as Imperial. The Provincial balance was therefore Rs. 77,20,000.

REVISED ESTIMATE, 1882-83.

5. Hitherto the estimates of the year about to expire, which are presented at the time of the preparation of the budget for next ensuing year, have been termed the "Regular" estimates. The term is a technical one, and its meaning may not be clear to all. The Government of India sees no reason for the continuance of the word, when another word, which any one can understand, is available, and has directed that the word "Revised" shall be used instead of "Regular."

6. The financial year, which has just expired, was the first year of an important advance in the policy of decentralization. A new contract has been entered into, under which the interest of the Provincial Government has been extended to Land Revenue, Forests, and Assessed Taxes—heads of revenue hitherto reserved as Imperial. A consideration of the revised estimates for 1882-83 will shew approximately what has been the position of the province in the first year of the contract.

A revised estimate, based on the actuals of eight months, and in some instances of ten months, was submitted to the Government of India with letter No. 539, dated the 17th February 1883. Later information has induced the Lieutenant-Governor to modify these estimates to a certain extent.

7. The following statement shows the estimates for the year 1882-83 as originally framed, the revised estimates as submitted to the Government of India, and the estimates as now modified:—

RECEIPTS.	Original estimate, 1892-93.	Revised estimate, 1892-93.	Revised estimate, 1892-93, as now modified.	EXPENDITURE.	Original estimate, 1892-93.	Revised estimate, 1892-93.	Revised estimate, 1892-93, as now modified.
Opening balance	Rs. 72,40,000	Rs. 77,20,000	Rs. 77,20,000	3.—Refunds and Drawbacks	Rs. 6,22,000	Rs. 1,27,000	Rs. 1,27,000
I.—Land Revenue	1,24,98,000	1,25,09,000	1,29,54,000	5.—Land Revenue	30,84,000	20,73,000	31,00,000
II.—Salt	1,70,000	1,04,000	1,04,000	7.—Salt	20,000	14,000	14,000
III.—Stamps	60,00,000	62,00,000	61,07,000	8.—Stamps	2,25,000	2,12,000	2,12,000
V.—Excise	50,05,000	48,75,000	48,94,000	9.—Excise	1,50,000	1,59,000	1,59,000
VI.—Provincial rates	35,74,000	38,03,000	38,03,000	16.—Provincial Rates .....	.....	.....	.....
VII.—Customs	85,000	78,000	78,000	11.—Customs	5,09,000	5,09,000	5,07,000
VIII.—Assessed Taxes	8,00,000	7,88,000	7,60,000	12.—Assessed Taxes	80,000	48,000	.....
IX.—Forest	5,50,000	3,87,000	3,40,000	13.—Forest	2,20,000	2,30,000	2,00,000
X.—Registration	5,00,000	5,17,000	5,20,000	14.—Registration	5,00,000	3,17,000	3,16,000
XV.—Law and Justice	17,10,000	16,49,000	16,25,000	18.—General Administration	1,18,000	14,78,000	15,07,000
XVI.—Police	5,45,000	5,20,000	4,80,000	19.—Law and Justice	98,00,000	98,20,000	92,65,000
XVII.—Marine	8,23,000	9,01,000	9,61,000	20.—Police	68,81,000	65,40,000	65,44,000
XVIII.—Education	5,14,000	5,60,000	5,22,000	21.—Marine	8,23,000	8,60,000	7,70,000
XIX.—Medical	1,42,000	1,42,000	1,34,000	22.—Education	20,00,000	20,00,000	20,11,000
XX.—Scientific and other Minor Departments	1,91,000	1,76,000	1,05,000	24.—Medical	14,26,000	13,73,000	11,55,000
XXI.—Interest	21,000	41,000	41,000	26.—Scientific and other Minor Departments	8,00,000	8,29,000	3,40,000
XXII.—Sue annuities	71,000	74,000	74,000	27.—Superannuation	10,28,000	11,55,000	11,80,000
XXIII.—Stationery and Printing	1,12,000	1,55,000	1,47,000	30.—Stationery and printing	10,04,000	9,35,000	9,05,000
XXIV.—Miscellaneous	0,43,000	0,88,000	0,88,000	31.—Miscellaneous	2,92,000	0,49,000	0,64,000
XXV.—State Railway (gross earnings)	36,20,000	35,20,000	35,28,000	32.—State Railways (working expenses)	35,70,000	19,33,000	10,05,000
XXVIII.—Irrigation and Navigation (direct receipts)	18,00,000	12,00,000	13,00,000	33.—Irrigation and Navigation (working expenses)	36,72,000	10,72,000	11,22,000
XXXI.—State Railways .....	.....	1,40,000	1,40,000	41.—Interest on debt— Railways .....	.....	14,20,000	14,14,000
XXXIII.—Irrigation and Navigation .....	.....	7,02,000	7,02,000	42.—Irrigation .....	.....	21,35,000	21,20,000
XXXV.—Civil buildings, roads and services	7,02,000	7,16,000	7,16,000	43.—State Railways (capital account) .....	.....	17,64,000	18,01,000
	3,99,90,000	4,08,08,000	4,05,67,000	45.—State Railways (working, &c.) .....	.....	1,25,000	1,25,000
Contribution from Local to Pro- vincial	1,60,000	.....	.....	46.—Subsidized railways .....	.....	24,00,000	24,00,000
Total	4,01,50,000	4,08,08,000	4,05,67,000	48.—Irrigation and Navigation	57,00,000	00,74,000	00,05,000
GRAND TOTAL	4,74,05,000	4,80,88,000	4,82,87,000	.....	4,51,00,000	4,51,46,000	4,54,03,000
				Contributions	14,88,000	2,75,000	2,58,000
				Closing balance	4,65,92,000	4,64,71,000	4,66,01,000
					8,13,000	29,67,000	29,38,000
				GRAND TOTAL	4,74,05,000	4,80,88,000	4,82,87,000
				Provincial surplus (+) Deficit (-)	-64,36,000	-50,53,000	-51,24,000

RECEIPTS.

8. *Land Revenue*.—The amount of percentage of Land Revenue assigned to Bengal under the new contract was originally fixed at 32·2284. In consequence of the re-transfer of the S. S. *Undaunted* from the Imperial to the Provincial Marine, and of the cemetery charges having again been made provincial, the Government of India at first added '1742 and '0214, respectively, to the percentage already assigned. It has since, however, been ruled that the original percentage of Land Revenue shall not be changed during the currency of the Provincial contract, and that effect shall be given to all transactions which would otherwise necessitate an alteration of the proportion by transfer of lump sums in reduction of, or in addition to, the amounts determined by the fixed proportion under the head of Land Revenue, from or to Imperial to or from Provincial. The amounts, therefore, which under this ruling have been added to the share of Bengal on account of the *Undaunted* and "Cemetery charges" are Rs. 65,000 and Rs. 8,000, respectively. The latest return from the Comptroller-General shews that the total Land Revenue of the Province may have amounted to Rs. 3,83,75,000, and a percentage of 32·2284 on this sum amounts to Rs. 1,23,67,000. The 10 per cent. on collections from Government estates, which is to be appropriated to the management and improvement of these estates, will probably have amounted to Rs. 3,78,000. The receipts from the duty on Shajehanpore rum realized in the North-Western Provinces, and other inter-provincial transactions adjusted through the clearing account of the Comptroller-General, may have realized in favour of this Government a sum of Rs. 1,10,000. The Provincial receipts under Land Revenue will then be—

	Rs.
are calculated at the percentage (32-2284)	1,23,67,000
On account of S. S. <i>Undaunted</i>	65,000
<i>Ditto</i> of cemetery charges	8,000
Ten per cent. collections from Government estates	3,78,000
Inter-provincial adjustments	1,10,000
Total	1,29,28,000

From this, however, must be deducted the amount of net savings effected in the Customs Department owing to the abolition of the bulk of the import duties. The savings in the cost of establishment during the year 1882-83 may have amounted to Rs. 1,50,000, but the additional charge for pensions, gratuities, and bonuses thrown on the Provincial Government on account of the retirement of the Customs officers may probably have amounted to about one lakh. A part of this would have, in any case, ultimately fallen on the Provincial revenues. A large portion, however, is an extraordinary charge which does not form an ordinary incident of the liability for superannuations. A representation on this subject will be made to the Government of India as soon as full information is available. Meanwhile the reduction on account of Customs establishment will be taken at Rs. 70,000, and the revised estimate of the Provincial share of Land Revenue will be placed at Rs. 1,28,58,000.

9. *Salt*.—The Provincial receipts under this head consist only of "Rents of warehouses," "Fines and Forfeitures," and "Miscellaneous fees, &c." These receipts were originally estimated at Rs. 1,39,000. Larger receipts were realized from the Sulkea Golahs than were at first anticipated, and the revised estimate stands at Rs. 1,64,000.

10. *Stamps*.—The original estimate of total stamp receipts for 1882-83 was Rs. 1,20,00,000, the same as the revised estimate for the preceding year. The actuals of 1881-82 were Rs. 1,20,24,000, and the revised estimate was, on later information, placed at Rs. 1,24,00,000. The latest returns tend to shew that the actuals may not have amounted to more than Rs. 1,22,13,000. Half of this belongs to Bengal, and the estimate as now modified stands at Rs. 61,07,000.

11. *Excise*.—The Lieutenant-Governor originally fixed the estimate for 1882-83, exclusive of duty on Shalijehanpore rum, at Rs. 1,00,00,000. From the indications afforded by the district returns during the year, it was anticipated that the revenue would not amount to more than Rs. 97,50,000. The actuals, however, were probably not less than Rs. 97,89,000, and half of this amount, or Rs. 48,94,000, will stand as the revised estimate for 1882-83.

12. *Provincial Rates*.—The Provincial portion of the estimate under this head includes—

- (1) The proceeds of the Public Works Cess.
- (2) Rates for the management of Wards' and Attached Estates.
- (3) Four annas rate per cent. on Wards' estates for treasury establishments.

The increase of Rs. 25,000 in the revised estimate, compared with the original estimate for 1882-83, is due to larger receipts from Public Works Cess in consequence of the revaluations in certain districts having been completed. The revised estimate stands at Rs. 36,03,000.

13. *Customs*.—The only Provincial items under this head are "Warehouse and wharf rents," "Fees for registration of cargo-boats in Chittagong," and certain other "Miscellaneous items." The receipts in 1881-82 were Rs. 86,000, and the original estimate for 1882-83 was placed at Rs. 85,000. The receipts may not have reached this estimate. The wharf rents have decreased owing to the abolition of the import duties. The revised estimate stands at Rs. 73,000.

14. *Assessed Taxes*.—The Accountant-General, in submitting the budget for 1883-84, estimated that the total receipts by the end of 1882-83 might amount to Rs. 16,00,000. The estimate was considered too sanguine, and it was reduced to Rs. 15,75,000. The latest returns tend to show that the totals will probably not have exceeded Rs. 15,20,000. The Provincial share will stand at Rs. 7,60,000.

15. *Forest*.—The receipts for 1882-83 were originally estimated at Rs. 7,00,000. An increase in revenue was anticipated from larger sales of timber and other produce to consumers in the Sunderbuns, and in consequence of the commencement of forest operations in the Angul and Khoordah forests in Orissa. The revised estimate was placed at Rs. 7,34,000. The Government of India has reduced the estimate to Rs. 7,20,000, which has been accepted by the Lieutenant-Governor.

16. *Registration*.—The original estimate of revenue under this head, including revenue record-room receipts, was Rs. 10,11,000. There has been a tendency of the receipts to expand, and the estimate was raised to Rs. 10,34,000.

in the Resolution of the 17th January 1883. The receipts will probably have amounted to Rs. 10,40,000 by the end of the year. The Provincial share will stand at Rs. 5,20,000.

17. *Law and Justice*.—The original estimate was Rs. 17,10,000, of which Rs. 9,06,000 appeared under the head of Law and Justice (Proper), and 8,04,000 under Jails. There has been a considerable falling off in the receipts from "General fees, fines, and forfeitures;" and there has also been a decrease under "Court-fees realized in cash," owing to the more extended use of court-fees stamps. The total receipts under Law and Justice (Proper) may not have amounted to more than Rs. 8,25,000. The revised estimate of total receipts under Law and Justice is Rs. 16,25,000.

18. *Police*.—The estimate, as now modified, amounts to Rs. 4,86,000, against Rs. 5,46,000 originally estimated. The decrease is specially under "Fees, fines, and forfeitures."

19. *Marina*.—The estimate under this head was raised from Rs. 8,23,000 to Rs. 9,01,000. There has been a considerable increase in pilotage receipts, and the estimate will be further raised to Rs. 9,51,000.

20. *Education*.—The latest figures shew that the estimate under this head should be fixed at Rs. 5,22,000.

21. *Medical*.—The estimate, as now modified, shews a decrease of Rs. 8,000 compared with the original estimate. There has been a falling off in "Hospital receipts;" and the "Proceeds of cinchona febrifuge sold by Civil Surgeons," which were formerly included under this head, have now been transferred to the cinchona account under the next following head.

22. *Scientific and other Minor Departments*.—The actual receipts under this head in 1881-82 were Rs. 1,97,000, and the original estimate for 1882-83 was placed at Rs. 1,91,000, of which Rs. 1,75,000 was estimated from cinchona febrifuge. The demand for this drug from the medical departments has diminished. The Government of Madras receives preparations made in England from bark sent from its own plantations, and the Bombay and Calcutta depôts are overstocked with preparations sent out from England. It is anticipated that the receipts from this source will not have exceeded Rs. 1,50,000. The total receipts will then stand at Rs. 1,65,000.

23. *Interest*.—The Provincial receipts consist of the proceeds of the invested capital of the Education Department, and the interest on arrears of Public Works cess realized under the provisions of section 45 of the Cess Act IX of 1880. The interest on the Government securities held by the Education Department averages about Rs. 16,000 a year, and that on account of Public Works cess was originally estimated at Rs. 5,000, but may have come up to Rs. 25,000. The total receipts will stand at Rs. 41,000.

24. *Superannuation*.—This is one of the budget heads made Provincial in the new Financial Contract. The increase of Rs. 3,000 in the revised estimate is due to the subscriptions of the members of the Civil Service who have arrived in India since 1881-82, and who are not allowed to subscribe to the Civil Fund.

25. *Stationery and Printing*.—The revised estimate will be increased from Rs. 1,35,000 to Rs. 1,47,000, with reference to the latest figures received from the Accountant-General.

26. *Miscellaneous*.—In the new Financial Contract all receipts recorded under this head, except "Gain by exchange on Imperial transactions," "Premia on bills," "Unclaimed bills-of-exchange," and extraordinary unclassified items exceeding Rs. 10,000, were made Provincial. The total receipts were originally estimated at Rs. 6,43,000. The receipts will probably have amounted to Rs. 6,88,000, as shewn in the revised estimate. This figure will accordingly stand.

27. *State Railways (XXV)*.—The gross earnings of State Railways, which have been classed as Productive Public Works, are shewn under this head. The Government of India has reduced the revised estimate from Rs. 35,29,000 to Rs. 35,28,000. The estimate of the Government of India will stand.

28. *Irrigation and Navigation (direct receipts—XXVII)*.—The revised estimate of Rs. 12,00,000 under this head has been accepted by the Government of India. Later information shews that the estimate may be raised to Rs. 13,00,000.

29. *State Railways (XXXI).*—The receipts from railways not classed as Productive Public Works are shewn under this head. At present the Sonarpore-Diamond Harbour branch of the Calcutta and South-Eastern Railway and the Kawnia-Dhurla Railway are included under this category. The Government of India has accepted the revised estimate of Rs. 1,49,000 under this head.

30. *Irrigation and Navigation (XXXIII).*—The receipts from rivers and canals not classed as Productive Public Works are included under this head. The revised estimate of Rs. 7,02,000 under this head has been accepted by the Government of India.

31. *Civil Buildings, Roads, and Services.*—The estimate of Rs. 7,02,000 under this head has been raised to Rs. 7,16,000. The revised estimate has been accepted by the Government of India.

32. *Contribution.*—The amount shewn under this head in the original estimate represented the accumulated balance of the Estates Improvement Fund, which was to be amalgamated with the Provincial Services. The actual balance amounted to Rs. 1,39,000, and has been incorporated in the Provincial Account of 1881-82.

EXPENDITURE.

33. *Refund and Drawbacks.*—The original estimate under this head was Rs. 6,22,000; but in accordance with the new classification, only the refunds under the revenue heads are to be entered here, the refunds of receipts by the Civil Department being incorporated with the service heads of expenditure. The revised estimate under this head stands at Rs. 1,27,000.

34. *Land Revenue.*—Under the new scheme the Imperial Government has only retained under this head the same percentage on the cost of surveys and settlements as has been retained of land revenue, the rest being made Provincial. In the Resolution of the 18th April 1882, the grant under this head for 1882-83 was fixed at Rs. 30,84,000. The charges for the management of Government estates were estimated at Rs. 2,50,000. These charges may have exceeded the estimate by Rs. 50,000. The Lieutenant-Governor would raise the estimate to Rs. 31,00,000.

35. *Salt.*—The original estimate under this head has been reduced by Rs. 2,000 in the revised estimate.

36. *Stamps.*—The revised estimate shews a decrease of Rs. 13,000 compared with the original estimate. The greater part of the decrease occurs under "Stamp paper supplied from central stores."

37. *Excise.*—The estimate, as now modified, is less than the original estimate by Rs. 1,000 only.

38. *Provincial Rates.*—This head in the Provincial estimate is blank, as the charges for the collection of Public Works cess, for which a sum of Rs. 46,800 is annually paid to the District Road Committees, are adjusted under the head "Contribution to Local Funds."

39. *Customs.*—The original estimate of this Government was Rs. 7,05,000. The Government of India, in consideration of the anticipated reductions in the Customs establishment owing to the abolition of the import duties, reduced the estimate to Rs. 5,69,000, and this figure was adopted in the Resolution of the 18th April 1882. The Accountant-General's last return tends to shew that the entire expenditure will have amounted to Rs. 5,57,000, and this amount will stand as the revised estimate for 1882-83.

40. *Assessed Taxes.*—The entire cost of collection will probably not have exceeded Rs. 96,000. Half this amount, or Rs. 48,000, will stand as the revised estimate for 1882-83.

41. *Forest.*—The revised estimate under this head, as passed by the Government of India, is Rs. 4,00,000. The Provincial share amounts to Rs. 2,00,000.

42. *Registration.*—The original estimate of Provincial expenditure has been reduced by Rs. 1,000.

43. *General Administration.*—The revised estimate, as now modified, shews an increase of Rs. 39,000 over the original estimate of Rs. 14,68,000. There is an increase of Rs. 19,000 under Tour expenses, Rs. 11,000 in Board's office, and Rs. 8,000 under Civil Secretariat. There is also an increase under "Staff and household of the Lieutenant-Governor," a part of which is due to

the higher rate of pay of the present Private Secretary, which was sanctioned in letter from the Government of India, Finance and Commerce Department, No. 2872, dated the 27th March 1882.

44. *Law and Justice*.—The grant under this head, excluding "Refunds," was estimated by the Government of India at Rs. 93,69,000. The expenditure on jail manufactures, for which Rs. 9,00,000 was provided in the budget, will not have exceeded Rs. 6,50,000. The refunds amount to about Rs. 1,40,000. The revised estimate may be placed at Rs. 92,65,000.

45. *Police*.—The original estimate under this head was Rs. 45,81,000. The revised estimate inclusive of "Refunds," amounting to Rs. 15,000, stands at Rs. 45,44,000.

46. *Marine*.—The original estimate amounted to Rs. 8,23,000, and the revised estimate, including "Refunds," to Rs. 8,66,000. There has been a large expenditure on account of building and repair of ships and under "Pilotage establishments." The estimate will be raised to Rs. 9,09,000.

47. *Education*.—The increase in the estimate, as now passed, compared with the original budget provision, is due partly to the debit under this head of the boarding charges of the students of the Civil Engineering College at Howrah, which were formerly included in the budget of the Public Works Department, and partly to larger expenditure under "Direction" and "Inspection."

48. *Medical*.—The "Medical Establishment (Proper)" has been made Provincial from the commencement of the year 1882-83. The total expenditure was estimated at Rs. 14,26,000. When the revised estimate was submitted to the Government of India, it was anticipated that the entire expenditure would not be more than Rs. 13,73,000. The expenditure under "Hospital and dispensaries" and "Grants for medical purposes" has, however, been smaller than was anticipated. The estimate, as now modified, stands at Rs. 13,55,000.

49. *Scientific and other Minor Departments*.—The actual expenditure in 1881-82 was Rs. 3,26,000, and the revised estimate for 1882-83 was placed at Rs. 3,29,000, against Rs. 3,06,000, the grant originally provided under this head. No provision was made in the original estimate for the completion of the census operations, the expenditure on which is reported to have amounted to Rs. 26,000. There has been larger expenditure under "Botanical Gardens" and "Exhibitions and Fairs," against savings in the cinchona allotment. The estimate has been raised to Rs. 3,40,000.

50. *Superannuation*.—As stated above, this is one of the budget heads made Provincial in the new Financial Contract. The charges were originally estimated at Rs. 10,28,000, and will probably have amounted to Rs. 11,80,000. The increase is for the most part due to the premature retirement of Customs officers under the reduction scheme.

51. *Stationery and Printing*.—The original grant under this head was Rs. 10,04,000. The latest return tends to shew that the expenditure may not have exceeded Rs. 9,65,000. This will stand as the last estimate for 1882-83.

52. *Miscellaneous*.—The original estimate under this head was Rs. 2,92,000, and miscellaneous refunds were taken at Rs. 3,38,000. The total expenditure will probably have amounted to Rs. 6,54,000, and this will be taken as the last estimate for 1882-83.

53. *State Railways (33)*.—The working expenses of those railways only which are classed as Productive Public Works are included under this head. The Government of India has increased the revised estimate under this head, amounting to Rs. 19,33,000, by Rs. 33,000. The increase is for the Northern Bengal and Patna-Gya lines. The Lieutenant-Governor accepts the estimate of the Government of India.

54. *Irrigation and Navigation (39)*.—The revised estimate of the irrigation canals, amounting to Rs. 10,72,000, has been passed by the Government of India. Later information, however, shews that this amount will be exceeded, and the estimate will be increased by Rs. 50,000.

55. *Interest*.—The original estimate of interest charges as advised by the Accountant-General, Public Works Department, was Rs. 39,55,000. The reduction of the rate of interest from $4\frac{1}{2}$ per cent. to 4 per cent. reduced this estimate to Rs. 35,16,000. The Government of India, however, increased the estimate of these charges to Rs. 35,62,000. This estimate was allowed to stand. The revised estimate provided for Rs. 35,55,000, which the Government of India

has reduced to Rs. 35,45,000. This includes interest on the capital of Rs. 66,000 laid out on the Ranaghat-Bhugwangola line in 1881-82, and on Rs. 1,00,000, which was to have been expended in 1882-83. As, however, the Provincial Government is not required to pay interest on these amounts, the estimate of the Government of India has been reduced by Rs. 5,000. The estimate will stand at Rs. 35,40,000.

56. *State Railways* (42).—This head is intended to comprise all expenditure on capital account, on tramways, railway surveys, and railways not classed as Productive Public Works. The revised estimate amounted to Rs. 17,54,000, from which, however, the provision of Rs. 47,000 for administrative charges had been omitted. The Government of India has accordingly raised the estimate to Rs. 18,01,000, which will stand.

57. *State Railways* (43).—The revised estimate of working expenses of State Railways, which were not classed as Productive Public Works, amounted to Rs. 1,25,000. This has been accepted by the Government of India.

58. *Irrigation and Navigation*. (46).—The revised estimate, amounting to Rs. 24,00,000, under this head, has been accepted by the Government of India, and will stand.

59. *Civil Buildings, Roads, &c.*—The revised estimate was made up as follows :—

						Rs.
Public Works in charge of	Public Works Department	..	..	..	..	60,25,000
Ditto	ditto	Civil Department	..	..	..	40,000
Refunds	...	...	...	...	...	9,000
Total						60,74,000

The expenditure by the Civil Department has probably not exceeded Rs. 36,000, and the grant of Rs. 62,212, made for acquiring lands for the site of the new civil station of Khoolna, has not yet been appropriated. The payments are likely to be made during the current year, and will be met from the grant fixed for that year. The estimate for the past year will stand at Rs. 60,08,000.

60. A sum of Rs. 13,50,000 was provided in the budget as a reserve for grants for local purposes during the year, and a sum of Rs. 1,36,000 for contribution to the Imperial Treasury on account of anticipated savings in the Customs Department. The savings in the Customs Department are now adjusted through "Land Revenue." The grant to Local Funds, including a contribution of Rs. 4,000 to the Burial Board, will not probably have amounted to more than Rs. 2,88,000. This amount will accordingly be taken as the revised estimate.

61. In the Resolution of the 18th April 1882, it was estimated that the year 1882-83 had opened with a credit balance of Rs. 72,49,000; that the total amount available for expenditure would be Rs. 4,74,05,000; that expenditure on all accounts would amount to Rs. 4,65,92,000; and that the year would close with a credit balance of Rs. 8,13,000. It has been shown above that the year 1882-83 actually opened with a credit balance of Rs. 77,20,000; that the receipts will probably have exceeded the estimate by Rs. 4,31,000; and that the expenditure will have fallen short of the total grant by Rs. 8,39,000. The closing balance of the year is therefore Rs. 25,54,000, which is better than the original estimate by Rs. 17,41,000.

BUDGET ESTIMATE, 1883-84.

62. The budget estimate for 1883-84 is as follows :—

						Rs.
Revenue	..	...	..	...	...	4,22,41,000
Expenditure	...	...	...	...	...	4,39,06,000
Deficit						—16,65,000

The revenue for 1883-84, including the allotment of Rs. 3,00,000 from the Famine Relief Fund towards the expenditure on the Orissa Coast Canal, is Rs. 16,74,000 more than that of 1882-83, according to the revised estimate as finally adopted; while the expenditure for 1883-84 is estimated at Rs. 17,85,000 less than that for 1882-83, according to the same estimates.

The following are the estimates of Provincial Revenue and expenditure for the current year:—

REVENUE.	Original estimate of Government of Bengal.	Estimate of Government of India.	Estimate as now modified.	EXPENDITURE.	Original estimate of Government of Bengal.	Estimate of Government of India.	Estimate as now revised.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Opening balance ...	26,06,500	24,84,000	26,56,000	3.—Refunds ...	1,13,000	1,02,000	1,13,000
I.—Land Revenue ...	1,27,87,000	1,25,68,000	1,25,01,000	5.—Land Revenue ...	30,08,000	30,00,000	31,53,000
III.—Salt ...	1,59,000	1,60,000	1,59,000	7.—Salt ...	21,000	21,000	21,000
IV.—Stamps ...	62,50,000	62,00,000	62,50,000	8.—Stamps ...	2,15,000	2,15,000	2,15,000
V.—Excise ...	46,00,000	46,00,000	51,50,000	9.—Excise ...	1,39,000	1,39,000	1,39,000
VI.—Provincial Rates ...	36,52,000	36,52,000	36,52,000	10.—Provincial Rates ...	...	...	...
VII.—Customs ...	65,000	65,000	65,000	11.—Customs ...	4,96,000	4,96,000	4,96,000
VIII.—Assessed Taxes ...	7,75,000	7,75,000	7,75,000	12.—Assessed Taxes ...	50,000	50,000	50,000
IX.—Forest ...	4,40,000	4,40,000	4,40,000	13.—Forest ...	2,50,000	2,50,000	2,50,000
X.—Registration ...	5,21,000	5,05,000	5,21,000	14.—Registration ...	3,12,000	3,12,000	3,12,000
XI.—Law and Justice ...	18,10,000	18,10,000	18,10,000	15.—General Administration ...	14,80,000	14,80,000	14,80,000
XVI.—Police ...	6,25,000	6,25,000	6,25,000	16.—Law and Justice ...	66,35,500	66,40,000	66,45,000
XVII.—Marine ...	8,95,000	8,95,000	8,95,000	20.—Police ...	47,78,000	47,78,000	47,78,000
XVIII.—Education ...	6,18,000	6,18,000	6,18,000	21.—Marine ...	8,50,000	8,50,000	8,50,000
XIX.—Medical ...	1,37,000	1,37,000	1,37,000	22.—Education ...	32,00,000	31,94,000	32,03,000
XX.—Scientific and other Minor Departments ...	1,71,000	1,71,000	1,71,000	23.—Medical ...	14,02,000	14,02,000	14,02,000
XXI.—Interest ...	41,000	41,000	41,000	24.—Scientific and other Minor Departments ...	3,66,000	3,66,000	3,66,000
XXII.—Superannuation ...	70,000	70,000	70,000	25.—Departments ...	11,00,000	11,00,000	11,00,000
XXIII.—Stationery and Printing ...	1,27,000	1,27,000	1,27,000	26.—Superannuation ...	16,50,000	16,50,000	16,50,000
XXIV.—Miscellaneous ...	6,82,000	6,82,000	6,82,000	27.—Stationery and printing ...	6,47,000	6,47,000	6,47,000
XXV.—State Railways (gross earnings) ...	31,77,000	30,76,000	30,83,000	28.—Miscellaneous ...	19,72,000	19,85,000	19,85,000
XXVII.—Irrigation and Navigation (direct receipts) ...	12,00,000	12,00,000	12,00,000	29.—State Railways (working expenses) ...	10,84,000	10,84,000	10,84,000
XXXI.—State Railways ...	2,45,000	2,45,000	2,45,000	30.—Irrigation and Navigation (working, &c.) ...	15,70,300	15,70,300	15,70,300
XXXIII.—Irrigation and Navigation ...	7,81,500	7,81,000	7,81,000	31.—Interest on debt—Railways ...	22,02,300	21,80,000	21,80,000
XXXV.—Civil buildings, roads, and services ...	7,51,000	7,84,000	7,84,000	32.—State Railways (capital account) ...	9,88,000	9,71,000	9,71,000
				33.—State Railways ...	1,01,000	1,02,000	1,02,000
				34.—Subsidized Railways ...	70,000	70,000	70,000
				35.—Irrigation and Navigation ...	16,00,000	16,00,000	16,00,000
				36.—Civil Buildings ...	41,02,000	41,02,000	41,02,000
					4,20,000	4,21,000	4,21,000
				Contributions ...	7,50,000	...	5,00,000
					4,36,37,000	4,36,00,000	4,36,37,000
Relief Fund ...	...	...	3,00,000	Closing balance ...	8,01,500	8,78,000	9,41,000
	4,10,22,900	4,14,00,000	4,10,41,000		4,45,80,400	...	4,45,37,000
	4,10,22,900	4,14,00,000	4,10,41,000	GRAND TOTAL ...	4,45,80,400	...	4,45,37,000
GRAND TOTAL	4,45,80,400	...	4,45,37,000	Provincial surplus (+) or Deficit (—) ...	—17,75,000	—16,04,000	—16,04,000

REVENUE.

63. *Land Revenue*.—The total land revenue for the year 1883-84 has been estimated at Rs. 3,79,68,000 or Rs. 44,000 more than the actuals of 1881-82, and Rs. 3,87,000 less than the estimate for 1882-83 as finally adopted. The Provincial share of land revenue was originally estimated at Rs. 1,27,38,000. No provision was made in the estimate for inter-provincial adjustments other than those for Shahjehanpore rum, and no deduction was made for savings in the Customs establishment. The estimate, as now adopted, has been obtained as follows:—

	Rs.	Rs.
The Provincial share, calculated at the percentage (32·2284) ...	...	1,23,16,000
10 per cent. on collections from Government estates ...	...	3,88,000
Inter-provincial adjustments ...	...	1,08,000
Additional charge for pensions of officers of the Customs Department ...	...	25,000
		1,28,37,000
Deduct—		
Contribution to Imperial for extension of meteorological observations ...	17,000	
Savings in Customs establishment ...	2,29,000	
		2,46,000
Total ...		1,25,91,000

65. *Salt*.—The revenue in the last year was swelled by abnormal receipts in the Sulkea Golahs. The estimate for the current year provides for a total receipt of Rs. 1,59,000, against Rs. 1,47,000, the actuals of 1881-82, and a decrease of Rs. 5,000 compared with the last estimate for 1882-83.

66. *Stamps*.—The Government of India has reduced the estimate of total revenue under this head from Rs. 1,25,00,000 to Rs. 1,24,00,000 with reference to the receipts of the past year, which have probably amounted to Rs. 1,22,13,000. The receipts during the first two months of the current year

show an increase of Rs. 1,57,000 over the receipts of the corresponding period of the past year. Looking to the continued development of this branch of the revenue, and to the extended use of court-fee stamps, the Lieutenant-Governor would adhere to the original estimate of Rs. 1,25,00,000. The Provincial share will accordingly be taken at Rs. 62,50,000.

67. *Excise*.—The growth of the excise revenue in Bengal during the last four years has been as follows:—

		Rs.		Rs.
1879-80	...	72,07,000	1881-82	93,74,000
1880-81	...	85,53,000	Revised estimate, 1882-83	97,89,000

The increase in 1880-81 was Rs. 13,46,000, in 1881-82 Rs. 8,21,000, and in 1882-83 Rs. 4,15,000. The increase during the first two months of the current year, compared with the receipts of the corresponding period of the past year, as shown in the district returns, amounts to Rs. 1,29,000, and though there has been a considerable reduction in the number of outstills, there are indications of a sustained increase in consequence of favourable settlements. The estimate for the current year will be taken at a round sum of Rs. 1,03,00,000, and the Provincial share at Rs. 51,50,000.

68. *Provincial rates*.—The revenue under this head shows a moderate but steady tendency to increase. The new Cess Act IX (B.C.) of 1880 came into operation in October of that year. The receipts from Public Works cess in 1880-81 aggregated Rs. 34,63,000, and in 1881-82 Rs. 34,84,000. In view of the revaluations in progress, a sum of Rs. 35,25,000 was estimated for 1882-83. The receipts will probably have aggregated Rs. 35,50,000. As it is expected that the revaluations now in progress will be brought to a close before the end of 1883-84, a sum of Rs. 36,00,000 has been estimated for the current year. The other receipts included under this head have been taken at Rs. 52,000. The total estimate stands at Rs. 36,52,000.

69. *Customs*.—The Provincial receipts are estimated at Rs. 65,500, against the original estimate of Rs. 85,000 for the past year. The decrease is due to smaller receipts anticipated from warehouse rents.

70. *Assessed Taxes*.—The last estimate of license-tax receipts for 1882-83 amounts to Rs. 15,20,000, against Rs. 16,39,000, the actuals of 1881-82. The decrease is due for the most part to reduction of receipts from penalties, a large portion of which could not be expected to recur during the year. There is a tendency of the receipts to increase during the current year. The estimate stands at Rs. 15,50,000, which has been accepted by the Government of India. One-half of this is Provincial.

71. *Forest*.—The Government of India has reduced the local estimate under this head from Rs. 8,80,000 to Rs. 8,00,000. The reduction appears specially in the estimate of the Kurseong and Singhbhum divisions, and under the head of bamboos. The Provincial share amounts to Rs. 4,00,000.

72. *Registration*.—The original estimate under this head was Rs. 10,42,000. The Government of India has reduced it by Rs. 31,000, and has adopted the estimate originally sanctioned for the past year. The estimate of this Government provided for an increase of Rs. 31,000, because it was anticipated that the registration of a large number of Indigo contracts and of documents connected with the settlement operations in Darbhunga would be effected during the current year, and it was considered that the receipts from searching fees under the rules of the High Court were likely to increase. The last estimate of the past year amounts to Rs. 10,40,000. The estimate of Rs. 10,42,000 will be retained for 1883-84. Half of this amount is Provincial.

73. *Law and Justice*.—The total receipts for 1883-84 under Law and Justice (Proper) have been estimated at Rs. 8,75,000, against Rs. 9,06,000, the first estimate for the past year. The decrease is owing to a certain extent to the more extended use of court-fee stamps, and to a consequent reduction in the amount paid as fees. An increase of revenue from this source has been provided in the Stamp budget. The original estimate of the Inspector-General of Jails placed the sale proceeds of jail manufactures at Rs. 12,43,000. These included receipts for goods supplied to the jails and departments coming under Law and Justice, which could not, under existing orders, be credited in the accounts. The estimate under the head of Jails amounts to

Rs. 9,35,000. The gross estimate under Law and Justice will be at Rs. 18,10,000.

74. *Police*.—The actuals in 1881-82 amounted to Rs. 5,23,000, and the revised estimate stood at Rs. 4,86,000. The estimate for the current year is Rs. 6,25,000. An increase is anticipated under "Recoveries on account of village police," and a provision of Rs. 65,000 has been made on account of "Deductions from policemen for clothing." These recoveries have not hitherto been shown in the general accounts, but have been deducted from the pay of the police, the net pay only being charged in the accounts.

75. *Marine*.—The estimate under this head amounts to Rs. 8,95,000, against Rs. 8,28,000, the original estimate for 1882-83. The estimate has been accepted by the Government of India, and will stand.

76. *Education*.—The total receipts of the Education Department for 1883-84, exclusive of the interest on Government securities belonging to that Department, are estimated at Rs. 6,18,000, against Rs. 5,22,000 for the past year. The estimate for the current year includes a sum of Rs. 65,000 on account of contributions from municipalities for educational purposes. Some increase is also anticipated under "Fees and fines of schools and colleges." The estimate, which has been accepted by the Government of India, will stand.

77. *Medical*.—The receipts are estimated at Rs. 1,87,000, against Rs. 1,36,000, the actuals of 1881-82, and will stand.

78. *Scientific and other Minor Departments*.—The public enquiry for cinchona febrifuge still continues to increase, but the demand from medical depôts has diminished. The total receipts in 1881-82 were Rs. 1,97,000, and the revised estimate for 1882-83 amounts to Rs. 1,65,000. The estimate for 1883-84 has been taken at Rs. 1,71,000.

79. *Interest*.—The estimate amounts to Rs. 41,000, the same as the revised estimate for the past year.

80. *Superannuation*.—The receipts are estimated at Rs. 79,000, against Rs. 74,000 for the current year. The increase is under the head of contributions for pensions and gratuities. The number of officers employed on duties outside the Government service has increased, but the rate of contribution has been reduced by the Government of India.

81. *Stationery and Printing*.—The receipts are estimated at Rs. 1,27,000, against Rs. 1,12,000, the original estimate for 1882-83. The increase is under "Sale of Stationery" and "Other Press Receipts." The revised estimate for 1882-83 amounts to Rs. 1,47,000.

82. *Miscellaneous*.—The receipts in 1881-82, exclusive of the sale-proceeds of durbar presents, were Rs. 7,01,000. The receipts formerly taken under "Other items" are now for the most part credited to the several departmental heads under orders of the Comptroller-General. The estimate for the current year is Rs. 6,82,000.

83. *XXV.—State Railways*.—The following table compares the estimates for 1883-84 with the revised estimate for 1882-83:—

	Revised estimate, 1882-83.	Estimate of Local Government, 1883-84.	Estimate of India, 1883-84.
	Rs.	Rs.	Rs.
Northern Bengal	22,00,000	24,00,000	23,00,000
Tirhoot	7,00,000	12,30,000	12,30,000
Patna and Gya	3,40,000	3,50,000	2,50,000
Calcutta and South-Eastern	1,68,000	1,25,000	1,25,000
Nalhati	70,000	72,000	70,000
Total	35,28,000	41,77,000	39,75,000

The traffic on the Northern Bengal Railway continues to expand, the improvement being chiefly due to a steady growth in jute and tobacco traffic. An increase of Rs. 2,00,000 was provided by the Public Works Department, but the Government of India would reduce this to Rs. 1,00,000. Having regard to the progressive increase in the receipts of this line during the past few years, the Lieutenant-Governor thinks that the higher figure is well within the mark. The estimate of the local Government will be retained.

The extensions to Jhinjaipore and Motihari of the Tirhoot Railway have recently been opened, and with this addition to the open mileage it is

expected that the increase of Rs. 5,30,000, allowed for in 1883-84, will be realized.

The Government of India has reduced the estimate of receipts from the Patna-Gya Railway by one lakh. The net receipts are estimated at Rs. 3,20,000, of which one-fifth is payable to the East Indian Railway Company under the terms of the working agreement, leaving a balance of Rs. 2,56,000 to be credited to Government for this. This amount will accordingly be taken as the estimate for the current year.

The estimate of the Calcutta and South-Eastern Railway for 1883-84 shews a decrease of Rs. 43,000 compared with the revised estimate for 1882-83. This is owing to the return of the rolling-stock previously hired to the Patna and Gya Railway. The receipts from this source now cease.

The Government of India has placed the estimate of the Nulhati Railway at Rs. 70,000, the same as the revised estimate for the past year. As some increase is anticipated, the original estimate of this Government, amounting to Rs. 72,000, will be retained.

84. *XVIII.—Irrigation and Navigation.*—The Government of India has accepted the local estimate of Rs. 12,00,000 under this head. The receipts during the past year will probably have amounted to Rs. 13,00,000, and there is no reason to suppose that the receipts during the current year will be less than those for the past year. The estimate will be raised to Rs. 13,00,000.

85. The Government of India has accepted the local estimates under XXXI, State Railways; XXXIII, Irrigation and Navigation; and XXXV, Civil Buildings, Roads and Services. The estimates will stand at Rs. 2,45,000, Rs. 7,81,000, and Rs. 7,84,000, respectively.

EXPENDITURE.

86. *Refunds.*—The difference of Rs. 4,000 under this head between the estimate of the Government of India and that of the Local Government represents the Provincial share of the rents payable to the superior landlords on account of the subordinate tenures in the escheated estates of Gya. This amount was added after the budget had been passed, and has probably not been included in the estimate of the Government of India. The local estimate of Rs. 1,18,000 will stand.

87. *Land Revenue.*—The estimate, as originally sanctioned by this Government, was Rs. 30,93,000. The total cost of surveys and settlements was estimated at Rs. 1,90,700, and the Provincial share at Rs. 61,800. The Government of India has raised this estimate by Rs. 10,000, and the Provincial share by Rs. 3,000. A reference has been made to the Government of India as to the inadequacy of the allotment made in the new contract to cover the charges which will be thrown on the Provincial Revenues according to the classification recently prescribed. Pending the result of this reference, the estimate of this Government will be retained. An addition of Rs. 60,000 will, however, be made under this head to cover the increase in the allotment for the charges on account of Government estates, which has been granted to meet the requirements of local officers. The total estimate will stand at Rs. 31,53,000.

88. *Salt.*—The estimate amounts to Rs. 21,000, against Rs. 18,000 for the past year. The increase is chiefly due to large provision being made for petty construction and repairs of the Chittagong golahs.

89. *Stamps and Excise.*—The local estimates of expenditure under *Stamps* and *Excise* have been accepted by the Government of India, and will stand at Rs. 2,15,000 and Rs. 1,39,000 respectively, against the revised estimate of Rs. 2,12,000 and Rs. 1,34,000 for the current year.

90. *Customs.*—The estimated expenditure for 1883-84 amounts to Rs. 4,96,000, shewing a decrease of Rs. 2,09,000 compared with the original estimate of Rs. 7,05,000 for the current year. The decrease is due to reductions in the Customs establishments owing to the abolition of the import duties.

91. *Assessed Taxes.*—A provision of Rs. 1,00,000 is made for the collection of license-tax during 1883-84. The same amount was fixed for 1881-82 and 1882-83. The expenditure on this account is equally divided between the Imperial and Provincial Governments. The Provincial share amounts to Rs. 50,000.

92. *Forest*.—The Government of India has passed the estimate under this head for a round sum of Rs. 5,00,000, against Rs. 5,20,000 adopted by this Government. A reorganization of the subordinate forest establishment has since been sanctioned at an annual cost of Rs. 90,000, against Rs. 72,600 provided in the budget, and the excess expenditure will have to be met from savings. The estimate of the Government of India will stand.

93. *Registration*.—The Provincial expenditure under this head is estimated at Rs. 3,12,000, against Rs. 3,15,000 for the past year. The reduction is mainly due to changes made in Chittagong and Arrah, under which the sub-registrars of those places, who were formerly in receipt of Rs. 200 per mensem each, are now paid partly by fixed salaries and partly by commission.

94. *Administration*.—The actual expenditure in 1881-82 amounted to Rs. 14,72,000. The estimate of the Local Government for 1883-84 was Rs. 14,89,000, and this has been raised by the Government of India to Rs. 14,90,000. The increase in 1883-84 is partly under "Secretariat Establishment" and partly under "Examiner of Local Accounts," the Government of India having sanctioned additional establishments for the extension of the system of local audit. The revised estimate for the past year is Rs. 15,07,000. There has been reduction in the Customs Department of the Board's Office. The estimate for 1883-84 will be Rs. 14,89,000.

95. *Law and Justice*.—The Government of India has adopted the estimate of the Accountant-General as originally submitted to this Government. This estimate made no provision for the pay of an additional Subordinate Judge for the new district of Khoolna, or for the personal allowance of Rs. 100 per mensem of the four Subordinate Judges now in the grade of Rs. 600, and getting Rs. 100 extra each. On the other hand, his estimate of charges for the service of judicial processes was reduced, and the hospital charges of "Central Jails" were increased with reference to the probable requirements of the year. The Lieutenant-Governor would retain the estimate of Rs. 96,45,000 as originally passed.

96. *Police*.—The estimate of police charges, including refunds, amounts to Rs. 47,78,000 against the original estimate of Rs. 45,81,000 for the past year. The large increase is mainly due to the amalgamation of the municipal with the regular police, and to additional provision for the Chittagong Frontier Police.

97. *Marine*.—The actual expenditure in 1881-82 was Rs. 10,55,000. The revised estimate amounts to Rs. 9,09,000, and the estimate for 1883-84, including refunds of Rs. 6,000, to Rs. 8,56,000. The large decrease in 1882-83 and 1883-84 is due to the transfer of the Port approaches and the False Point light-house to the Port Commissioners. The revised estimate for the past year also includes a large expenditure for ship-building, which it is expected will not recur in 1883-84. A grant of Rs. 6,000 has been made to the Balasore Port Fund, which will be adjusted under this head. The estimate will stand at Rs. 8,62,000.

98. *Education*.—The original grant for 1882-83 was Rs. 29,60,000. The revised estimate amounts to Rs. 30,11,000, and the Accountant-General's estimate for 1883-84 provides for a total expenditure of Rs. 31,94,000, which includes an additional provision of one lakh for primary education over the grant for the past year. A sum of Rs. 2,000 has been added to the Accountant-General's estimate for travelling expenses of Inspectors of Schools, Rs. 2,000 for a building grant to the St. James' Boys' School, and Rs. 5,000 to the grant for primary education in Government estates. The estimate, as passed by the Local Government, amounts to Rs. 32,03,000, and will stand.

99. *Medical*.—The actual expenditure in 1881-82 was Rs. 10,75,000. The revised estimate of the past year amounts to Rs. 13,55,000, and the estimate for 1883-84, including refunds of Rs. 8,000, to Rs. 14,02,000. The large increase in 1882-83 and 1883-84 is due to the transfer to Medical Establishment Proper, from Imperial to Provincial, the cost of which is estimated at Rs. 4,70,000. Against this increase there has been a decrease under hospitals and dispensaries, owing to the transfer to municipalities of the hospitals and dispensaries situated within municipal limits.

100. *Scientific and other Minor Departments*.—The estimate under this head amounts to Rs. 3,66,000 against the original estimate of Rs. 3,03,000 for

the past year. A provision of Rs. 11,000 has been made on account of the proposed extension of the cinchona plantation to the trans-Teesta portion of the Darjeeling district. A provision of Rs. 60,000 has been made for the International Exhibition to be held in Calcutta in the middle of 1883-84. The estimate of Rs. 3,66,000 for the current year will stand.

101. *Superannuation*.—The charges for 1883-84 were originally estimated by the Accountant-General at Rs. 12,16,000, against the original estimate of Rs. 10,28,000 for the past year. A sum of Rs. 50,000 was provided for marine pensions, which were formerly adjusted under the head of Imperial Marine. The provision has been struck out, as the marine pensions were not made Provincial in the new contract. The revised estimate for 1882-83 amounts to Rs. 11,80,000. The increase is mainly due to the premature retirement of Customs officers. The charges for bonuses and gratuities will not be so large as in 1882-83, and the total estimate has been placed at Rs. 11,67,000.

102. *Stationery and Printing*.—The difference of Rs. 9,000 between the estimate of the Government of India and that of this Government represents the amount by which the Local Government reduced the Accountant-General's estimate of the cost of printing for the Opium Department at private presses. The Board of Revenue reported that there was no necessity for this provision, and it was struck out. The local estimate of Rs. 9,51,000 will stand.

103. *Miscellaneous*.—The Government of India has entered Rs. 3,74,000 as the estimate under this head, made up as follows:—

	Rs.
Imperial	45,000
Provincial	3,09,000
Local	20,000
Total	3,74,000

The Provincial expenditure amounts to Rs. 3,09,000, and to this has been added Rs. 3,38,000 on account of miscellaneous refunds. The grant will stand at Rs. 6,47,000.

104. *State Railways (36)*.—The details of the estimates under this head, compared with the revised estimate for 1882-83, are as follow:—

	Revised estimate, 1882-83, Rs.	Estimate, 1883-84.	
		Local Government. Rs.	Government of India. Rs.
Northern Bengal	10,60,000	11,40,000	11,00,000
Tirhoot	4,65,000	6,71,000	7,30,000
Patna and Gya	2,60,000	...	...
Calcutta and South-Eastern	1,18,000	91,600	92,500
Nulhati	62,500	61,000	62,500
Total	19,65,500	19,72,500	19,85,000

An increase of Rs. 80,000 was provided in the estimate of the Northern Bengal Railway to cope with the larger traffic expected, and also to provide for extensive renewals of sleepers found to be necessary. The Government of India has reduced the anticipated increase of expenditure to Rs. 40,000.

The large addition made in the estimate of the Tirhoot Railway is due to the additional lengths of line recently opened to traffic.

No provision has been made for the Patna-Gya Railway, as it will be worked by the East Indian Railway Company. A reduction of expenditure is anticipated in the Calcutta and South-Eastern Railway.

105. *Irrigation and Navigation (39)*.—The Government of India has adopted the local estimate of Rs. 10,84,000.

106. *Interest*.—As explained above, the Local Government is not liable for interest charges on the capital expended and to be expended on the Ranaghat-Bhugwangola line. The estimate of the Government of India, amounting to Rs. 37,89,000, will be reduced by Rs. 9,000.

107. *State Railways Capital Account (42)*.—The difference of Rs. 15,000 under this head between the estimate of the Government of India and that of Bengal is due to the refund of Rs. 15,000, advanced from Provincial Funds in 1882-83, for the Tarakespur railway survey. The estimate of the Government of India will be adopted.

108. *Subsidized Railways (41).*—The provision of Rs. 70,000 made under this head is for the cost of the land which will be taken up in 1883-84 for the Baidyabutty-Tarakessur Railway.

109. *Civil Buildings, Roads, and Services.*—The grant under this head is raised to Rs. 44,62,000.

110. *Contribution.*—A sum of Rs. 7,50,000 was originally reserved for contributions to municipal and other local funds. It is doubtful if so large a provision will be required in the current year, and the estimate will be reduced to Rs. 5,00,000.

111. *Incorporated Local Funds.*—The following table shews in one view the actual receipts and expenditure of the Incorporated Local Funds during 1881-82, the revised estimates for 1882-83, and the estimates for 1883-84:—

	Actuals, 1881-82.	Revised estimate, 1882-83.	Estimate of Local Govern- ment. 1883-84.	Estimate of Government of India, 1883-84.
RECEIPTS.	Rs.	Rs.	Rs.	Rs.
Opening balance ...	19,47,000	15,76,000	16,01,000	13,04,000
District Road Fund ...	37,70,000	39,32,000	36,73,000	36,55,000
Ditto Road Account ...	9,000	7,000	6,000	6,000
Ditto Post Fund ...	3,16,000	3,55,000	3,17,000	3,17,000
Estates Improvement Fund ...	1,33,000	.....	.....	.....
Inland Labour Transport Fund ...	88,000	64,000	74,000	74,000
Contribution from Provincial ...	3,00,000	2,84,000	3,47,000	3,10,000
Total ...	46,16,000	46,42,000	44,17,000	43,62,000
GRAND TOTAL ...	65,63,000	62,18,000	60,18,000	56,66,000
EXPENDITURE.				
District Road Fund ...	43,18,000	41,95,000	48,43,000	48,43,000
Ditto Road Account ...	55,000	57,000	52,000	52,000
Ditto Post Fund ...	3,02,000	3,17,000	3,24,000	3,24,000
Estates Improvement Fund ...	1,13,000	.....	.....	.....
Inland Labour Transport Fund ...	60,000	48,000	61,000	61,000
Contribution to Provincial ...	1,39,000	.....	.....	.....
Total ...	49,87,000	46,17,000	52,80,000	52,80,000
Closing balance ...	15,76,000	16,01,000	7,38,000	3,86,000
GRAND TOTAL ...	65,63,000	62,18,000	60,18,000	56,66,000

The revised estimates for 1882-83, as shown above, have been framed with reference to the latest figures of the year received from the Accountant-General. This estimate shews that the receipts in the past year, including the grants-in-aid from Provincial Funds, may have amounted to Rs. 46,42,000, and the expenditure to Rs. 46,17,000. There was thus a surplus of Rs. 25,000, instead of a deficit of Rs. 1,65,000 as estimated in the Resolution of 18th April 1882. For 1883-84 the Government of India has accepted the estimates of receipts and expenditure as originally submitted by the Accountant-General. The Lieutenant-Governor, with reference to the actuals of 1881-82, raised the estimate of miscellaneous receipts of the District Road Fund by Rs. 20,000, and reduced those from the 1 per cent road cess by Rs. 2,000. The estimate, as passed by this Government, will accordingly stand.

By order of the Lieutenant-Governor of Bengal,

COLMAN MACAULAY,

Secretary to the Government of Bengal.

**PROPORTION IN WHICH THE PAY OF MEDICAL OFFICERS IN CHARGE
OF MUNICIPAL DISPENSARIES, SUBSIDIARY JAILS AND SUB-DIVI-
SIONS, IS TO BE PAID BY GOVERNMENT AND MUNICIPALITIES.**

MUNICIPAL DEPARTMENT—MEDICAL.

Darjeeling, the 4th July 1883.

RESOLUTION.

In the Resolution of the Financial Department, dated the 20th February 1882, by which municipalities were relieved of all charges on account of police, and were, on the other hand, required to bear the cost of maintaining dispensaries situated within municipal limits, no orders were passed to define what proportion of the pay of a medical officer, who was in charge both of a municipal dispensary and of a sub-division and lock-up, was to be considered a charge against the dispensary. Experience has shown that in almost every case the charge of a municipal dispensary can be conveniently united with that of a sub-division, without detriment to the work of either, and that it is unnecessary to maintain two medical officers at the head-quarters of a sub-division—one, the servant of the municipality, in charge of the municipal dispensary; and the other, the servant of Government, in charge of the sub-division and subsidiary jail. By amalgamating the two appointments, the salary which one of these officers would have drawn is saved, and the question arises as to the proportions in which the saving should be divided between Government and the municipality.

2. A medical officer holding the dual appointment is entitled to draw—(1) his grade pay; (2) any special allowances to which he may be entitled under the rules on account of the dispensary, sub-division, or subsidiary jail. The additional allowances present no difficulty. A dispensary allowance would be paid by the municipality; while those for the sub-division and jail would be borne by Government. Hitherto, however, no fixed rule has existed as to the incidence of the grade pay. This is sometimes borne wholly by Government, sometimes wholly by the municipality, and sometimes in varying proportions by both. The Lieutenant-Governor considers that this anomalous state of things should not be allowed to continue, and that some definite principle should be laid down to regulate the proportions in which the charge should be shared between Government and the municipality.

3. The Lieutenant-Governor has consulted the Surgeon-General and district and divisional officers on the subject. The Government undertakes, as a part of the medical administration of the province, to maintain a civil medical officer at the head-quarters of every sub-division, irrespective of any arrangements that may be made by municipalities for the charge of their dispensaries. When the services of an officer of this class are in part lent to any municipality, it would not be unreasonable to require that a corresponding part of his salary should be paid by the Municipality. The Lieutenant-Governor, however, desires to treat local Government bodies with the utmost liberality in his power. He has therefore resolved that, when any municipality desires to utilize for the charge of its dispensary the services of the medical officer provided by the Government for the charge of the sub-division, it shall be entitled to avail itself of those services on payment of the usual dispensary allowance only, and shall not be required to bear any part of the medical officer's grade pay. On the other hand, however, it would manifestly be unjust that, in such a case, Government should be expected to post to any sub-division a medical officer of higher qualifications than are needed for the proper discharge of the Government work alone, i.e., for the medical charge of the subsidiary jail and sub-division, apart from the municipal dispensary. The Surgeon-General is of opinion that the requirements of an ordinary sub-division will be adequately met by appointing a civil hospital assistant of the lowest class. The Lieutenant-Governor therefore directs that the pay of an officer of this class shall be considered to be the standard pay of a sub-divisional charge, and shall be borne wholly by Government. In some sub-divisions, however, exceptional circumstances will probably render it necessary to provide an officer of higher qualifications. In all such cases, the class of an officer to be appointed will be settled authoritatively, and his pay will be borne entirely by Government. Thus, if a civil hospital assistant of the third class is sufficient for the requirements of both the sub-division and the municipal dispensary,

his entire salary will be borne by Government, the municipality being only required to pay his dispensary allowance. Similarly, where an officer of a higher class than a third class hospital assistant is appointed to the sub-division on the part of Government, the municipality will not be called upon to make any contribution towards his grade pay, if his qualifications are such as to meet their requirements.

4. On the other hand, cases will probably arise in which the charge of a municipal dispensary may require, for its proper conduct, an officer of higher professional qualifications than is needed for the medical charge of the sub-division and subsidiary jail apart from the dispensary. In such a case the Lieutenant-Governor will be prepared to appoint to the dual charge an officer of the Government establishment of such qualifications as the municipality may desire, provided that his services can be made available on the condition that the municipality are prepared to pay the whole difference between his grade pay and that of the standard Government medical officer sanctioned for the sub-division, besides paying him the usual dispensary allowance.

5. The Surgeon-General will be requested to prepare at once, in consultation with the local civil and medical officers, a list of all the sub-divisions in the province, classified according to the grade of medical officer they require for the Government work alone; and the proportions of the charge on account of the medical officer's pay to be borne by Government and the local municipality respectively will in each case be determined in accordance with the principle now laid down. This principle will also be applied, *mutatis mutandis*, in the case of any sub-division at the head-quarters of which there is a dispensary in class I of the rules, which is maintained otherwise than by a municipality, and the supporter of which is desirous of availing himself of the services of the Government civil medical officer in charge of the sub-division.

ORDER—Ordered that a copy of the above Resolution be forwarded to the Surgeon-General for information and guidance.

Ordered also that a copy of the above Resolution be forwarded to all Commissioners of Divisions for information and for communication to all municipalities in their divisions.

By order of the Lieutenant-Governor of Bengal,

COLMAN MACAULAY,

Secretary to the Government of Bengal.

Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the Crops in the different Districts of Bengal, as reported to Government during the week ending the 7th July 1883.

No.	District, and date of return.	Rainfall at Sudder Station in inches.	Character of the weather, state and prospects of the crops, and state of health at date.
BENGAL.			
<i>Western Districts.</i>			
BURDWAN DIV.	1 Burdwan, July 7 '83	0.08	Weather—cloudy, with drizzling showers at intervals. In the Cutwa sub-division agricultural operations have been retarded for want of rain. Insufficient rain is also reported from Culna. In other parts of the district, ploughing and transplanting are in progress and prospects are fair.
	Runcegunge	3	
	Culina	0.72	
	Cutwa	1.48	
	2 Bankura, " 7 "	3.11	
	Bishenpore	2.97	
BURDWAN DIV.	Muliana	1.85	Weather—hot, cloudy, and rainy; very favourable for cultivation. <i>Biri kalai</i> is being sown. Both early and late rice are being transplanted. Prospects of crops are promising. Public health good.
	Khutra	2.89	
	3 Beerbhoom, " 7 "	2.92	
	Kampore Haut	0.06	
	4 Midnapore, " 7 "	3.16	
	5 Hooghly, " 7 "	2.91	
BURDWAN DIV.	Bowrah July 9 "	2.81	Weather—showery and seasonable. Cultivation of rice crop going on briskly. Prospects satisfactory. General health good. A few cases of cholera in south of district.
	Qooloberia	3.41	
	6 24-Pergunnahs, July 9 '83	3.46	
	7 Nuddea, " 7 "	.....
	Knooshtea	1.85	
	Meherpore	1.97	
BURDWAN DIV.	Choodanga	0.69	Weather—cloudy and rainy. The early crops are doing well. Transplanting of <i>amun</i> rice is going on in low lands. High lands are being prepared for the purpose. Public health is generally good.
	Ranaghat	2.51	
	8 Khoolna, " 7 "	2.50	
	9 Jessore, " 7 "	1.24	
	Bongong	2.85	
	Jhenida	2.27	
BURDWAN DIV.	Narail	0.89	Weather—cloudy, rainy and cool. State of crops fairly good. Manufacture of indigo commenced. Fever stationary.
	Magura	2.13	
	10 Moorsabad, " 7 "	1.03	
	11 Dinagore, July 6 '83	0.26	
	12 Rajshahye, " 7 "	1.25	
	Nattore	1.60	
BURDWAN DIV.	Nowgong	0.31	Weather—cloudy, with constant showers. Transplanting of <i>amun</i> rice has begun; prospects are good. Public health is good.
	13 Runepore, " 7 "	0.04	
	Gaibanda	0.27	
	Kurigram	0.30	
	Nilphamari	.....
	14 Bogra, " 7 "	1.68	
BURDWAN DIV.	15 Babna, " 7 "	1.50	Weather—only a good fall of rain during the week, and a slight drizzle next day (5th). Transplanting of <i>amun</i> commenced. Jute and <i>amun</i> paddy are doing well. General health good.
	16 Darjeeling, " 7 "	3.17	
	17 Jaijigore, " 7 "	1.89	
	Cooch Behar, " 7 "	0.53	
	Dinhatia up to 1st.	3.45	
	Mathabanga up to 30th.	9.21	
BURDWAN DIV.	Meekhgunge up to 30th.	9.73	Weather—changeable; first cool with northerly winds followed by still hot days. Crops doing well. Rain wanted. Rivers falling.
	Eastern Districts.		
	18 Dacca, July 7 '83	0.98	
	Manickgunge	0.94	
	Munshgunge	2.73	
	Naraingunge	1.62	
BURDWAN DIV.	19 Furrusepore, " 7 "	0.50	Weather—seasonable. Prospects of standing crops good. Transplanting of <i>amun</i> and harvesting of <i>amun</i> going on. Cases of cholera reported from the Nilphamari division of the district.
	Goulundo	0.88	
	Mudarpore	1.90	
	20 Backergunge, " 5 "	4.78	
	21 Mymensingh, " 6 "	0.46	
	Jamulpore	0.94	
BURDWAN DIV.	Kishoregunge	Not received	Weather—hot. Prospects of the crops continue to be favourable. Transplanting of <i>amun</i> has commenced in some places. Health generally good.
	Atta	0.42	
	Netrokona	0.51	

No.	District, and date of return.	Rainfall at Sudder Station in inches.	Character of the weather, state and prospects of the crops, and state of health at date.
BENGAL—concl.			
Eastern Districts—concl.			
22	Chittagong July 10 '83	1.78	Weather—seasonable. Transplanting of <i>aus</i> rice nearly over. Sowing of <i>amun</i> actively going on. Prospects fair. Prices stationary, sporadic cholera and cattle-disease continue. Fever abating.
23	Noakholly, " 5 "	7.43	Weather—generally cloudy with occasional rain and coldish towards the morning. <i>Aus</i> paddy is ripening and <i>amun</i> is being transplanted, generally low parts of the district are flooded.
24	Tipperah, " 5 "	4.78	Weather—seasonable. Early rice, jute, and sugarcane progressing well. Report of some damage by insects to early rice plants, not serious, received from four of the police stations of the district. Public health generally good.
25	Brahmunbaria Chandpore " 8 "	3.17 5.80	Weather—occasional showers; heavy thunderstorm on the afternoon of 2nd. <i>Jhum</i> paddy doing well, but cotton crop will be very short.
	Chittagong Hill Tracts " 8 "	3.62	Weather—warm, rainy and seasonable. <i>Amun</i> paddy being transplanted. <i>Til</i> being gathered. Prospects of sugarcane fair. Public health good.
	Hill Tipperah " 7 "	6.91	
BEHAR			
26	Patna July 7 '83	Nil	Weather—hot and cloudy. Sowing of <i>bhadoi</i> and paddy is going on. Sugarcane is progressing. Cholera still reported from Behar and Si'ao thana.
	Barh " "	0.1	
	Behar " "	2.77	
	Dinapore " "	0.10	
27	Gya " 7 "	2.00	Weather—cloudy and cool with high wind. Paddy, Indian-corn, and pulses are being sown under favourable auspices. Cholera is abating, but cattle-pox is very prevalent.
28	Shahabad, " 7 "	0.67	Weather—hot and cloudy at intervals. State and prospects of the crops favourable.
	Buxar " "	0.09	
	Sasaram " "	0.80	
	Bhishobah " "	0.40	
29	Darbhanga, " 7 '83	0.32	Weather—hot and cloudy with east wind. Agricultural operations in rapid progress. <i>Murwa</i> , <i>makai</i> and <i>dhan</i> being transplanted. Prices stationary. Cholera almost gone.
30	Muzaffarpore, " 7 "	0.87	Weather—cloudy and showery with intervals of strong sun. The weather is very favourable to the young crops which are coming up. Sowings and transplanting make good progress.
	Hajepore " "	0.17	
	Seetamurhee " "	0.70	
31	Saran, " 7 "	3.97	Weather—generally cloudy and hot. Sowings of <i>bhadoi</i> crops going on. Transplanting of paddy in low lands has commenced. Manufacture of indigo has begun; prospects on the whole good. Sporadic cases of cholera, and small-pox reported from Gopalgunge sub-division.
	Sewan " "	0.04	
	Gopalgunge " "	Nil	
32	Champaran " 7 "	4.8	Weather—cloudy with high winds and showers. All crops looking well. <i>Bhadoi</i> and <i>aghani</i> sowings in progress. General health fair.
33	Monghyr July 7 '83	0.11	Weather—hot and cloudy. <i>Bhadoi</i> and <i>aghani</i> sowings progressing. Prospects favourable. Public health good.
	Begusarai " "	0.11	
	Jamui " "	0.11	
34	Bhagulpore, " 7 "	0.11	Weather—hot; more rain in south of district than in the Sudder or northern subdivisions. In the part of the district south of the Ganges the prospects are good. In the north the prospects though not so good, are fair. Ploughing and sowing going on actively. General health good.
35	Purneah, " 7 "	1.59	Weather—steamy. State and prospects of crops very good. Health fair.
36	Maldah, " 7 "	0.13	Weather—sky clear; moderate south-east wind and occasional showers of rain. <i>Jali</i> rice is being reaped. The standing crops, such as <i>bhadoi</i> , <i>amun</i> , <i>makai</i> , and <i>khari</i> , are doing well, but more rain is wanted. Public health generally good.
37	Southal Pergah, " 7 "	1.50	Weather—cloudy, with occasional showers. <i>Bhadoi</i> crops promising. Transplanting of rice crop progressing.
	Deoghur " "	2.06	
	Godda " "	2.05	
	Rajmehal " "	Nil	
	Jamtara " "	1.48	
	Pakour " "	0.77	
ORISSA.			
38	Cuttack July 6 "	9.53	Weather—cloudy and rainy. <i>Real</i> and <i>serad</i> rice are growing well, but in some places the young plants have been submerged in consequence of heavy rain, but no damage is reported. The rivers rose, but are now falling; only one breach in the Alanka bund has been reported. Prices stationary. Public health generally good.
39	Pooree, " 5 "	Not given.	Weather—very wet. Heavy rain all over the district. The rivers are in flood; embankments have been breached in three places and some damage to crops in low lands is anticipated. Miscellaneous crops thriving. Common rice selling at from 25 to 36 seers for the rupee. Public health good.
	Khoorda " "	10.54	
40	Balasore, " 6 "	9.97	Weather—cloudy and rainy with occasional gleams of sunshine. Rainfall in June about 18 inches, not far from one-third the average fall of the year. Crops are doing well. Re-ploughing is going on. Rice selling at from 25 to 44 seers to the rupee. Public health generally good.
CHOTA NAGPORE.			
South-West Frontier Agency.			
41	Hazaribagh July 6 '83	3.25	Weather—warm and cloudy. Sowing of <i>bhadoi</i> and early rice crops continues. General prospect good. Public health good.
42	Lohardugga " 7 '83	6.35	Weather—showery. A break would do good at head-quarters. Cutting of <i>Jowar</i> <i>dhan</i> has begun. Prospects favourable. In Palamow, though little rain has fallen, matters are satisfactory. There have been a few cases of cholera in Hazaribagh. Prices steady.
	Palamow " "	3.32	
43	Singbhoom, " 6 "	6.30	Weather—seasonable. The rainfall has been general and abundant. Everything doing well. Prospects fair. General health good.
44	Manbhoom, " 7 "	6.63	Weather—rainy and cool. Prospects of rice crop and of upland crops very promising. Public health good.
	Govindpore " "	1.42	

Published for general information.

CALCUTTA, STATISTICAL DEPT.,
The 10th July 1883.COLMAN MACAULAY,
Secy. to the Govt. of Bengal.

STATEMENT SHOWING THE STOCK OF RICE IN AND AROUND CALCUTTA.

NAMES OF MARKS.	STOCK IN HAND AS COMPILED ON—										
	1st week of July 1883.	1st week of August 1883.	1st week of Sept. 1883.	1st week of Oct. 1883.	1st week of Nov. 1883.	1st week of Dec. 1883.	1st week of Jan. 1884.	1st week of Feb. 1884.	1st week of March 1884.	1st week of April 1884.	1st week of May 1884.
Balichatta ...	Mds. 3,30,540	Mds. 3,54,000	Mds. 4,17,500	Mds. 4,31,000	Mds. 4,00,000	Mds. 3,50,000	Mds. 3,85,000	Mds. 3,30,000	Mds. 7,40,000	Mds. 8,55,000	Mds. 6,50,000
Chitrapur ...	65,500	71,700	75,700	65,200	65,500	47,000	57,100	45,200	89,000	1,00,400	1,07,500
Chitrapur, Golaheer, Comer- tooly, Hattah, and Culp Ghat.	6,59,700	7,05,900	7,94,700	7,05,500	6,49,000	6,95,500	6,62,000	6,11,400	7,22,500	9,14,500	7,92,900
Patherichatta, Pota, and Jorabagan.	16,500	21,900	22,000	23,000	19,500	16,500	21,700	13,200	19,500	18,500	3,400
Tollymore, Chittah, Kidderpore, and Moonshigan.	1,04,700	1,30,900	1,55,500	1,35,500	1,05,500	1,04,000	1,17,900	1,00,000	1,11,000	1,30,400	1,37,500
31 Minor Rivers (estimated) ...	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000
Other retail shops, 2,120 in number (estimated).	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000
Boldhabatty, Norengum, Khidreer, and Chander- nagore.	18,919	21,125	19,975	20,531	17,151	9,750	7,994	6,012	6,975	12,625	13,525
Total ...	17,67,519	18,41,965	19,05,475	19,54,551	16,07,001	16,14,450	17,41,944	15,19,313	21,90,175	24,95,928	22,03,525
On Railway premises on both sides of the river.	4,005	2,790	5,522	740	5,492	4,406	5,673	790	3,576	3,786	2,223
On boats un- loaded ...	(on 3rd July 83.) 24,008 (1st to 3rd July 83.) 49,073 (1st to 3rd July 83.) 49,073	(on 5th August 83.) 77,377 (3rd to 5th August 83.) 54,191 (3rd to 5th August 83.) 54,191	(on 2nd Sept. 83.) 56,003 (1st to 3rd Sept. 1883.) 59,250 (1st to 3rd Sept. 1883.) 59,250	(on 5th Oct. 83.) 39,252 (2nd to 4th Oct. 83.) 39,252 (2nd to 4th Oct. 83.) 39,252	(on 4th Nov. 83.) 22,899 (1st to 3rd Nov. 83.) 24,095 (1st to 3rd Nov. 83.) 24,095	(on 2nd Dec. 83.) 37,125 (1st to 3rd Dec. 83.) 18,487 (1st to 3rd Dec. 83.) 18,487	(on 3rd Jan. 84.) 38,000 (1st to 3rd Jan. 84.) 1,22,775 (1st to 3rd Jan. 84.) 1,22,775	(on 3rd Feb. 84.) 21,293 (1st to 3rd Feb. 84.) 1,15,354 (1st to 3rd Feb. 84.) 1,15,354	(on 3rd March 84.) 69,116 (1st to 3rd March 84.) 62,019 (1st to 3rd March 84.) 62,019	(on 4th April 84.) 38,256 (2nd to 4th April 84.) 75,572 (2nd to 4th April 84.) 75,572	(on 3rd May 84.) 25,109 (1st to 3rd May 84.) 24,441 (1st to 3rd May 84.) 24,441
Grand Total of Stocks ...	18,46,006	19,76,573	20,56,450	19,40,515	16,50,907	16,74,803	19,06,991	19,54,919	23,39,184	26,14,069	22,63,297
Probable stock available for exportation by sea.	8 lakhs.	9½ lakhs.	9½ lakhs.	9 lakhs.	6 lakhs.	6½ lakhs.	9½ lakhs.	9 lakhs.	13½ lakhs.	16½ lakhs.	13 lakhs.

STATISTICAL DEPARTMENT,
The 7th July 1883.COLMAN MACAULAY,
Secy. to the Govt. of Bengal.

PRICES CURRENT of Food-grains, Firewood, and Salt in the

Number.		DISTRICTS.	RETAIL SALE.—QUANTITIES PER RUPEE BY																							
			WHEAT.			BARLEY.			RICE, BEST SORT.			RICE, COMMON.			BULBUSH MILLET— CUMBOO, BAJRA.			GRASS MILLET— CHOLU, JOWAR.								
			Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.						
BENGAL.																										
Western Districts.																										
1	Burdwan	...	16 0	15 8	14 0	20 0	20 0	40 0	18 12	19 0	21 5	23 12	24 0	24 0	...	...	...	...	...	...	...	...	...	...	...	...
2	Bankura	...	13 12	14 0	13 12	19 0	19 0	17 0	18 8	18 12	28 0	24 0	24 0	30 0	...	...	...	...	...	...	...	...	...	...	...	...
3	Barrackpore	...	15 0	15 12	14 0	...	...	...	18 0	18 8	21 0	22 8	21 0	28 0	...	...	...	...	...	...	...	...	...	...	...	...
4	Midnapore	...	14 0	14 0	14 0	16 0	17 0	...	18 0	18 0	20 0	24 0	24 0	26 0	...	...	...	...	...	...	...	...	...	...	...	...
5	Hooghly	...	13 8	13 8	18 0	...	...	...	10 0	10 0	10 0	18 8	18 8	20 0	...	...	...	...	...	...	...	...	...	...	...	...
6	Howrah	...	13 4	13 0	13 0	...	...	...	13 4	14 8	16 0	19 8	20 0	20 0	...	...	...	...	...	...	...	...	...	...	...	...
Central Districts.																										
7	Calcutta	...	14 0	14 4	14 0	27 8	19 6	28 8	10 5	10 5	10 8	16 0	16 0	20 0	20 0	20 0	...	...	...	...	...	...	...	...	...	20
8	24-Pargunnahs	...	13 5	13 5	12 0	16 0	16 0	21 4	8 0	8 0	10 0	16 12	14 0	17 0	...	...	...	...	...	...	...	...	...	...	...	20
9	Nudda	...	14 8	14 8	14 8	...	22 16	26 0	15 4	15 4	17 6	16 12	17 4	20 0	...	...	...	...	...	...	...	...	...	...	...	...
10	Khoolna	...	...	...	...	...	...	...	17 0	17 0	16 0	25 0	25 0	23 0	...	...	...	...	...	...	...	...	...	...	...	...
11	Jessore	...	14 8	14 8	16 0	...	...	...	16 0	16 0	18 12	22 12	22 12	24 8	...	...	...	...	...	...	...	...	...	...	...	...
12	Moorshedabad	...	16 0	17 0	16 0	...	...	...	15 0	16 0	17 12	19 0	19 0	25 0	...	...	...	...	...	...	...	...	...	...	...	...
13	Dinapore	...	13 8	11 0	18 0	...	11 0	16 0	18 0	18 0	24 0	19 8	20 6	27 0	...	...	...	...	...	...	...	...	...	...	...	...
14	Rajshahi	...	16 8	16 8	13 8	30 0	30 0	40 12	13 8	13 8	18 0	17 4	17 4	21 12	...	...	...	...	...	...	...	...	...	...	...	...
15	Rungpore	...	11 7	11 7	16 0	...	...	...	13 5	13 5	16 0	17 8	17 8	20 0	...	...	...	...	...	...	...	...	...	...	...	...
16	Bogra	...	15 0	15 0	17 4	...	...	...	12 0	12 0	16 8	24 0	24 0	28 2	...	...	...	...	...	...	...	...	...	...	...	...
17	Pubna	...	19 8	19 8	18 12	...	...	...	8 0	8 0	10 0	19 8	17 4	24 0	...	...	...	...	...	...	...	...	...	...	...	...
18	Darjeeling	...	8 0	8 8	8 0	8 0	8 0	8 0	4 0	5 0	5 0	8 0	9 0	18 0	...	...	...	...	...	...	...	...	...	...	...	...
19	Jalpigore	...	10 0	10 0	9 0	20 0	20 0	20 0	11 8	13 4	16 0	16 0	18 0	24 0	...	...	...	...	...	...	...	...	...	...	...	...
Eastern Districts.																										
20	Dacca	...	12 4	14 8	12 4	18 12	17 0	22 0	15 8	15 12	22 0	19 4	19 4	23 12	19 0	...	...	...	...	...	...	...	...	...	...	...
21	Farrakpore	...	20 0	20 0	22 0	20 0	20 0	25 0	18 0	16 0	22 0	18 0	18 0	23 0	...	...	...	...	...	...	...	...	...	...	...	...
22	Hackergunge	...	...	...	...	...	...	...	19 0	19 0	20 0	21 0	21 0	24 0	...	...	...	...	...	...	...	...	...	...	...	...
23	Mymensingh	...	11 8	12 0	11 8	...	...	...	16 0	18 0	22 8	17 8	17 8	29 0	...	...	...	...	...	...	...	...	...	...	...	...

- A In the sub-divisions retail prices of salt are as follow :—Quina 13½ seers, Cutwa 11 seers, and Ranegunge 18 seers.
 B Retail price of salt at Raipore 11 seers, Sonamukhi 12 seers, and Mejia, Bishnupore, Indas and Kotulpore 12 seers.
 C In the interior retail prices of salt range from 9 to 18 seers.
 D In the sub-divisions retail prices of salt are as follow :—Chattal 12½ seers, and Tumloik and Contal 11 seers.
 E In the sub-divisions retail prices of salt are as follow :—Serampore 13½ seers, and Jehanabad 13½ seers.
 F In the sub-divisions retail prices of salt are as follow :—Barasat and Bussirat 13 seers, Diamond Harbour 10½ seers, Barrackpore 12½ seers, and Dam-Dam 12 seers.
 G In the sub-divisions retail prices of salt are as follow :—Koothra 12½ seers, Meherpore 12 seers, Choodanga 12½ seers, and Ranaghat 18 seers.
 H In the sub-divisions retail prices of salt are as follow :—Sakthira and Nagirhat 11 seers.
 I In the sub-divisions retail prices of salt are as follow :—Jhanda, Magura and Narail 12 seers, and Bongong 18 seers.
 J In the sub-divisions retail prices of salt are as follow :—Lalbagh 11 seers, Jungpore 10 seers, and Kandi 11½ seers.

THE MARK OF 60 TOLAH.

LEONARD MILLET - RAGI OR MURWA AND CHUNRA.		MAISE OR INDIAN- COON.	
Present return.	Next preceding return.	Present return.	Next preceding return.
Corresponding return of last year.		Corresponding return of last year.	

[illegible][illegible]

100	200	300	400	500	600
700	800	900	000	100	200
300	400	500	600	700	800
900	000	100	200	300	400
500	600	700	800	900	000
100	200	300	400	500	600

GRAN.			FIREWOOD.		
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.

S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.
22	0	21	0	23	8	120	0	120	0
18	0	18	8	20	0	320	0	320	0
21	0	21	0	22	8	160	0	200	0
16	0	16	0	19	0	155	0	155	0
17	0	17	0	21	0	120	0	120	0
16	8	17	0	20	0	80	0	80	0

17	12	17	12	23	0	90	0	90	0
18	12	16	0	18	8	90	0	80	0
20	0	20	0	23	0	...	...	...	...
16	0	16	0	19	0	180	0	180	0
20	0	20	0	18	0	120	0	120	0
23	0	27	0	25	0	120	0	120	0
17	8	17	8	17	0	160	0	160	0
21	0	21	0	24	12	240	0	240	0
16	0	16	0	15	0	110	0	110	0
15	12	15	12	18	12	60	0	67	8
17	8	18	0	20	0	200	0	200	0
8	0	8	0	9	0	128	0	128	0
16	0	14	0	16	0	128	0	128	0

18	8	14	8	21	0	100	0	90	0
16	0	16	0	19	0	120	0	120	0
18	0	18	0	18	0	120	0	120	0
15	9	13	4	16	0	...	...	...	...

Districts of Bengal for the Fortnight ending 30th June 1883.

SALT.			WHOLESALE RICES PER MAUND OF 40 SEERS.			AVERAGE WAGES PER MONTH									DISTRICTS.
			SALT.			ABLE-BODIED AGRICULTURAL LABOURER.			BYND OR HORSE-KEEPER.			COMMON MASON CARPENTER, OR BLACKSMITH.			
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	
BENGAL.															
Western Districts.															
S. Ch.	S. Ch.	S. Ch.	R. A. P.	R. A. P.	R. A. P.	S. Ch.	S. Ch.	S. Ch.	R. A. P.	R. A. P.	R. A. P.	R. A.	R. A.	R. A.	
12 4	12 0	12 12	3 1 0	3 1 8	2 13 0	7 8	9 6	9 6	6 8	6 8	6 8	{ 10 0 to 14 0 }	{ 10 0 to 15 0 }	{ 10 0 to 15 0 }	Burdwan.
12 0	12 0	12 1	3 3 6	3 3 6	3 4 0	{ 6 0 to 9 0 }	{ 6 0 to 9 0 }	{ 6 0 to 9 0 }	{ 4 8 to 5 8 }	{ 4 8 to 6 8 }	{ 4 8 to 6 8 }	{ 7 8 to 12 0 }	{ 7 8 to 12 0 }	{ 7 8 to 12 0 }	Bankura.
10 0	10 8	12 8	3 13 6	3 10 8	3 4 0	{ 4 0 to 5 0 }	{ 4 0 to 5 0 }	{ 4 0 to 5 0 }	{ 5 2 to 5 0 }	{ 5 0 to 5 0 }	{ 5 0 to 5 0 }	{ 10 0 to 7 8 }	{ 10 0 to 9 0 }	{ 10 0 to 9 0 }	Boorhoom.
12 0	12 0	12 8	2 14 0	2 14 0	3 0 0	{ 6-1-6 to 5 10 }	{ 5 10 to 5 13 }	{ 5 13 to 5 0 }	{ 5 0 to 5 8 }	{ 5 8 to 5 0 }	{ 5 0 to 5 0 }	{ 7 8 to 10 0 }	{ 7 8 to 6 9 }	{ 6 9 to 7 8 }	Midnapore.
12 9	12 9	12 9	2 14 0	2 14 0	2 14 0	...	...	...	...	...	...	...	...	...	Hughly.
12 0	12 0	12 0	3 0 0	3 0 0	2 14 0	7 8	7 8	7 8	6 8	6 8	6 8	14 0	14 0	14 0	Howrah.
Central Districts.															
14 0	14 0	14 9	2 12 0	2 12 0	2 8 0	15 0	15 0	10 0	7 0	7 0	7 0	12 0	12 0	11 8	Calcutta.
12 5	12 5	14 8	2 14 0	2 14 0	2 12 0	...	...	...	...	...	...	...	...	...	24-Pargannas.
11 10 1/2	11 10 1/2	12 12 1/2	3 0 0	3 1 11	2 12 1	{ 6 0 to 9 0 }	{ 6 0 to 9 0 }	{ 6 0 to 8 0 }	{ 6 0 to 8 0 }	{ 6 0 to 5 0 }	{ 6 0 to 5 0 }	{ 7 8 to 15 0 }	{ 7 8 to 15 0 }	{ 10 0 to 12 0 }	Nuddee.
10 8	11 0	11 0	3 4 0	3 4 0	3 2 0	{ 9 0 to 12 0 }	{ 9 0 to 10 0 }	{ 8 0 to 8 0 }	{ 6 0 to 8 0 }	{ 5 0 to 7 0 }	{ 5 0 to 7 0 }	{ 10 0 to 15 0 }	{ 10 0 to 15 0 }	{ 10 0 to 15 0 }	Khoolna.
10 12	11 0	11 8	3 4 0	3 4 0	3 2 0	7 8	7 8	7 8	4 0	6 0	6 0	{ 13 0 to 15 0 }	{ 10 0 to 15 0 }	{ 15 0 to 15 0 }	Jessore.
10 0	12 0	12 8	.....	3 4 0	3 2 0	4 0	5 0	5 0	5 0	5 0	5 0	7 8	7 8	7 8	Moorshedabad.
11 6	11 8	12 0	3 7 0	3 7 0	3 5 0	{ 6 0 to 7 0 }	{ 6 0 to 7 8 }	{ 6 0 to 7 8 }	{ 6 0 to 8 0 }	{ 5 0 to 8 0 }	{ 5 0 to 8 0 }	{ 8 0 to 30 0 }	{ 8 0 to 30 0 }	{ 8 0 to 30 0 }	Dinapore.
11 4	10 8	12 0	.....	3 12 9	3 4 0	{ 6 0 to 6 0 }	{ 6 0 to 6 0 }	{ 6 0 to 6 0 }	{ 5 0 to 7 0 }	{ 5 0 to 7 0 }	{ 5 0 to 7 0 }	{ 15 0 to 15 0 }	{ 20 0 to 20 0 }	{ 15 0 to 15 0 }	Rajshahy.
11 14	11 14	11 8	3 5 0	3 5 0	3 5 3	...	...	...	...	...	...	...	...	...	Rangpo.
10 8	10 8	12 0	3 8 0	3 6 8	3 2 8	{ 5 0 to 6 0 }	{ 5 0 to 6 0 }	{ 5 0 to 6 0 }	{ 6 0 to 6 0 }	{ 6 0 to 5 0 }	{ 6 0 to 5 8 }	{ 10 0 to 15 0 }	{ 12 0 to 16 0 }	{ 10 0 to 15 0 }	Bogra.
12 0	11 4	12 0	3 4 0	3 5 0	3 0 0	{ 6 0 to 7 0 }	{ 6 0 to 5 0 }	{ 6 0 to 5 0 }	{ 6 0 to 7 8 }	{ 5 0 to 6 0 }	{ 5 8 to 6 0 }	{ 11 0 to 20 0 }	{ 10 0 to 30 0 }	{ 10 0 to 16 8 }	Faboo.
8 0	8 0	8 0	4 8 0	4 8 0	4 8 0	...	...	...	...	...	...	...	...	...	Darjeeling.
11 0	11 0	11 0	3 6 0	3 4 0	3 4 0	7 8	8 0	7 8	7 0	8 0	8 0	{ 15 0 to 20 0 }	{ 25 0 to 30 0 }	{ 20 0 to 30 0 }	Jaliscoon.
Eastern Districts.															
12 0	12 4	12 6	3 4 0	3 2 0	2 15 0	{ 5 0 to 6 0 }	{ 5 0 to 6 0 }	{ 5 0 to 6 0 }	{ 5 0 to 6 0 }	{ 5 0 to 6 0 }	{ 5 0 to 6 0 }	{ 8 0 to 20 0 }	{ 8 0 to 20 0 }	{ 8 0 to 20 0 }	Unac.
11 8	12 0	11 0	3 7 0	3 5 0	3 5 4	8 8	7 8	7 8	7 0	7 0	6 0	15 0	15 0	15 0	Farrukpore.
12 0	12 0	10 9	3 11 0	3 11 0	3 11 0	7 8	7 8	7 8	6 0	6 0	6 0	{ 8 0 to 15 0 }	{ 8 0 to 15 0 }	{ 8 0 to 15 0 }	Haoragunge.
12 0	12 4	12 8	3 4 0	3 4 0	3 2 0	{ 8 0 to 9 0 }	{ 8 0 to 9 0 }	{ 8 0 to 9 0 }	{ 6 0 to 6 0 }	{ 6 0 to 6 0 }	{ 6 0 to 6 0 }	{ 15 0 to 30 0 }	{ 15 0 to 30 0 }	{ 15 0 to 30 0 }	Myinsingh.

K Retail price of salt at Raigunge 11½ seers and Nitpore 12 seers.

L In Nattore and Nowgong retail price of salt 12 seers.

M In the sub-divisions retail prices of salt are as follow:—Gaibanda 10 seers, Nilphamari 12 seers.

N In Barajungo retail price of salt 12 seers.

O Retail price of salt at Kuraoong 8 seers and Silligoree 10 seers.

P Retail price of salt at Fallacotta in Alipore sub-division 10 seers.

Q In the sub-divisions retail prices of salt are as follow:—Manickgunge 11 seers, Moonsheegunge 10 seers 10½ chittacks, and Naraingunge 13½ seers.

R In the sub-divisions retail prices of salt are as follow:—Gosain 10½ seers, Madaripore 12 seers, Bhanga 11 seers, and Chapalgunge 12½ seers.

S In the sub-divisions retail prices of salt are as follow:—Paukhali 10½ seers, Perozapore 11 seers, and Bhoia 9 seers.

T In the sub-divisions retail prices of salt are as follow:—Kishoregunge 10½ seers, Attea 12 seers, Jamalpore 11 seers, and Netrokona 12½ seers.

PRICES-CURRENT of Food-grains, Firewood, and Salt in the

Number.	DISTRICTS.	RETAIL SALE :—QUANTITIES PER RUPEE BY THE																							
		WHEAT.			BARLEY.			RICE, BEST SORT.			RICE, COMMON.			HULBUSH MILLET— CUMBOO, HAJRA.			GRASS MILLET— CHOLU, JOWAR.								
		Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.						
Eastern Districts.—(Concluded.)																									
22	Chittagong.	U 12 0	12 0	9 0	...	...	...	13 0	13 0	20 0	20 0	22 0	25 0	...	...	...	...	...	...
23	Noakhally	V ...	...	...	...	...	...	20 0	20 0	27 0	22 0	22 0	31 0	...	...	...	...	...	...
24	Tipperah	W 11 6	12 12	11 8	...	...	...	18 8	17 8	32 0	19 4	30 0	28 8	...	...	...	...	...	...
25	Chittagong Hill Tracts.	...	...	...	...	...	...	12 4	12 8	16 0	13 8	14 4	17 12	...	...	...	...	...	...
	Hill Tipperah	10 0	10 0	11 0	...	...	...	17 0	16 0	34 0	20 0	20 0	33 0	...	...	...	...	...	...
BEHAR.																									
26	Patna	17 8	17 8	16 8	32 0	32 0	34 0	14 0	14 0	11 8	19 0	19 0	21 8	...	...	...	...	...	...
27	Gya	X 20 8	20 0	17 0	26 0	27 0	28 0	12 0	12 0	12 0	15 0	16 0	20 0	...	...	...	...	...	...
28	Shahabad	Y 17 0	17 0	15 15 1/2	25 0	27 0	30 0	11 0	11 8	20 0	15 0	16 1/2	23 0	23 0	30 0	...	...	...	...		
29	Darbhanga	Z 17 0	17 0	14 0	37 0	36 0	36 0	13 8	13 0	14 0	18 0	18 0	17 0	...	...	...	...	...	...
30	Muzaffarpore	Z1 18 0	17 0	16 0	30 0	29 0	30 0	13 0	12 0	12 0	16 0	17 0	16 0	...	...	...	...	...	...
31	Barua	Z2 17 0	17 0	16 8	27 0	27 0	30 0	10 0	10 0	10 0	18 0	18 0	21 0	...	...	...	30 0	29 0	32 0			
32	Chumpra	Z3 19 0	19 0	18 0	36 0	40 0	36 0	13 0	13 0	12 0	17 0	18 0	21 0	...	...	...	...	...	...
33	Monghyr	Z4 18 10	18 14	16 12	27 14	31 8	34 9	13 14	14 10	15 12	15 12	16 12	19 15	...	...	...	...	...	...
34	Bhagalpore	Z5 16 8	16 0	14 8	27 12	27 8	30 4	15 2	15 12	18 15	17 10	17 10	22 12	...	...	...	...	...	...
35	Purneah	Z6 16 0	16 0	14 0	...	...	...	16 0	16 0	20 0	18 0	15 0	25 0	...	...	...	...	...	...
36	Maldah	17 0	17 8	16 0	...	...	...	14 0	16 0	10 0	16 0	18 0	19 0	...	...	...	...	...	...
37	Sonthal Perghe.	14 0	14 0	13 0	...	...	...	16 0	16 0	18 0	22 0	22 0	24 0	...	...	...	...	...	...
ORISSA.																									
38	Cuttack	13 2	11 13	14 7	...	...	...	13 2	14 7	17 1	22 5	23 10	27 9	...	...	...	...	...	...
39	Pooree	Z7 13 2	13 2	11 4	...	...	...	20 0	21 0	22 0	23 10	23 10	25 0	...	...	...	...	...	...
40	Balasore	Z8 14 0	14 0	16 0	...	...	...	16 0	16 0	26 0	28 0	28 0	32 0	...	...	...	...	...	...
CHOTA NAAGPORE.																									
South-Western Frontier Agency.																									
41	Hazaribagh	Z9 16 0	16 0	16 0	18 0	22 0	24 0	10 0	10 0	10 0	16 0	16 0	19 0	...	...	...	...	...	...
42	Lohardugga	16 0	17 0	18 0	23 0	29 0	36 0	16 0	18 0	22 0	22 0	22 0	23 0	...	...	...	...	...	...
43	Singbhoom	18 0	20 0	20 0	32 0	32 0	28 0	30 0	32 0	36 0	40 0	36 0	40 0	...	...	...	...	...	...
44	Manbhoom	Z10 13 0	13 0	13 0	...	...	...	17 0	18 0	19 0	27 0	27 0	34 0	...	...	...	...	...	...

- In the interior retail prices of common rice vary from 31½ to 39½ seers.
 U Retail prices of salt at Kumeriah 10 seers, and Hathazaree and Cox's Bazar 8 seers.
 V In the interior retail prices of salt range from 5 to 12½ seers.
 W In the sub-divisions retail prices of salt are as follow :—Mirahmunberiah 12 seers and Chandpore 12½ seers.
 X In Nowada retail price of salt 10 seers.
 Y In the sub-divisions the retail prices of salt are 10½ to 11 seers.
 Z In the sub-divisions retail prices of salt are as follow :—Madhubani 9 seers and Tajpore 12 seers.
 Z1 In the interior retail prices of salt range from 9 to 12 seers.
 Z2 In the sub-divisions retail prices of salt are as follow :—Bewari 11½ seers, and Gopalgunge 12 seers.

CALCUTTA,
The 10th July 1883.

ORDER OF 80 TOLAHS.

LARGER MILLER— RAGI OR MURWA AND CHENNA.			MAISE OR INDIAN- CORN.		
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.

S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.
...
...
...
...
...

...	...	...	82 0	82 0	34 0
...
...
80 0	40 0	23 0	30 0	40 0	39 0
...	...	...	52 0	52 0	35 0
30 0	30 0	31 0	29 0	30 0	31 0
...	...	...	...	...	41 0
...	...	...	27 14	33 9	33 9
...	...	...	...	...	41 8
...
...
...	...	...	26 0	30 0	35 0

14 7	13 2	14 7	...	...	...
...
...

30 0	30 0	33 0	31 0	31 0	30 0
30 0	29 0	36 0	...	...	28 0
...
...

GRAN.			FRANWOOD.		
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.

S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.
12 0	12 0	16 0	40 0	40 0	80 0
12 0	12 0	14 0	...	...	...
12 12	12 14	17 0	...	...	...
...	...	...	320 0	320 0	320 0
12 0	12 0	14 0	...	...	...

29 8	29 8	30 0	120 0	120 0	120 0
28 8	25 0	26 0	120 0	120 0	120 0
27 0	} 28 1	30 0	120 0	110 0	120 0
28 0		...	...	...	...
24 0	25 0	25 0	160 0	160 0	130 0
23 0	25 0	25 0	140 0	140 0	140 0
26 0	27 0	28 0	140 0	160 0	160 0
27 0	28 0	30 0	...	...	...
25 12	26 4	31 8	126 0	126 0	126 0
34 0	34 10	39 10	126 8	151 8	151 8
22 0	20 0	23 0	160 0	160 0	160 0
23 0	23 0	26 0	120 0	120 0	120 0
21 0	20 0	20 0	200 0	200 0	200 0

17 1	18 6	22 5	80 0	80 0	100 0
18 6	18 6	15 0	104 0	104 0	100 0
14 0	14 0	16 0	120 0	120 0	160 0

19 0	18 0	21 0	240 0	240 0	240 0
14 0	14 0	19 0	110 0	120 0	120 0
24 0	24 0	24 0	160 0	160 0	160 0
17 0	17 0	17 0	120 0	120 0	120 0

Districts of Bengal for the Fortnight ending 30th June 1883.—(Concl'd.)

SALT.			WHOLESALE PRICES PER MAUND OF 40 SEERS.			AVERAGE WAGES PER MONTH									DISTRICTS.
			SALT.			ABLE-BODIED AGRICULTURAL LABOURER.			BYE OR HORSE- KEEPER.			COMMON MASON, CARPENTER, OR BLACKSMITH.			
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	
Eastern Districts.—(Concluded)															
6 0	9 0	18 0	4 0 0	4 0 0	2 14 0	{ 7 8 to 11 4	{ 7 8 to 9 6	{ 7 8 to 10 0	{ 6 0 to 7 8	{ 7 0 to 8 0	{ 6 0 to 7 0	{ 7 8 to 10 8	{ 7 8 to 10 0	{ 9 0 to 10 0	Chittagong.
10 0	10 0	11 0	3 6 0	3 6 0	3 2 0										
11 8	12 4	12 8	3 6 0	3 4 0	3 4 0	{ 6 0 to 9 0	{ 6 0 to 9 0	{ 6 0 to 9 0	{ 5 0 to 7 0	{ 5 0 to 7 0	{ 5 0 to 7 0	{ 7 0 to 16 0	{ 7 0 to 16 0	{ 7 0 to 16 0	Tipperah.
6 4	6 1	10 0	6 0 0	6 0 0	3 8 0										Chittagong Hill Tracts.
11 0	11 0	10 0	3 4 0	3 4 0	3 6 0	7 8	7 8	7 8	6 0	6 8	6 8	13 0	14 0	14 0	Hill Tipperah.
BKHAR.															
10 8	10 8	10 9	3 0 0	3 0 0	3 2 0										Patna.
12 0	12 0	11 8	.....	3 5 0	3 4 0	{ 2 8 to 3 0	{ 2 8 to 3 0	{ 3 8 to 3 0	{ 3 0 to 5 0	{ 3 0 to 5 0	{ 3 0 to 5 0	{ 6 0 to 8 0	{ 6 0 to 8 0	{ 6 0 to 8 0	Dya.
12 8	12 8	13 0	3 1 0	3 1 0	3 0 0	{ 4 0 to 5 0	{ 4 0 to 5 0	{ 4 0 to 5 0	{ 4 0 to 5 0	{ 4 0 to 5 0	{ 4 0 to 5 0	{ 7 8 to 10 0	{ 7 8 to 10 0	{ 7 8 to 10 0		Shahabad.
10 0	10 0	11 0	3 10 0	3 10 0	.....	{ 3 8 to 5 0	{ 3 8 to 4 0	{ 3 8 to 4 0	{ 3 8 to 5 0	{ 3 8 to 5 0	{ 3 8 to 5 0	{ 4 0 to 10 0	{ 4 0 to 10 0	{ 4 0 to 10 0	Darbhanga.
11 8	11 8	12 8	3 6 0	3 6 0	3 2 0										MonuGurpore.
11 0	11 0	11 0	3 6 0	3 8 0	3 8 0	{ 4 12 to 7 8	{ 3 12 to 5 10	{ 3 0 to 3 12	{ 4 0 to 6 0	{ 4 0 to 6 0	{ 4 0 to 6 0	{ 6 0 to 10 0	{ 6 0 to 10 0	{ 6 0 to 10 0	Saran.
11 0	11 8	10 8	3 10 0	3 6 0	.....	{ 6 0 to 5 10	{ 6 0 to 5 10	{ 6 0 to 5 10	{ 4 0 to 6 0	{ 4 0 to 6 0	{ 4 0 to 6 0	{ 6 0 to 10 0	{ 6 0 to 10 0	{ 6 0 to 10 0	Chumpanan.
12 0	12 1	12 10	3 2 8	3 2 8	3 1 0	3 12	3 12	3 12	4 0	4 0	4 0	{ 7 8 to 10 0	{ 7 8 to 10 0	{ 7 8 to 10 0	Monghyr.
12 10	12 10	12 10	3 0 6	3 3 1	.....	{ 4 0 to 5 0	{ 4 0 to 5 0	{ 4 0 to 5 0	{ 4 0 to 5 0	{ 4 0 to 5 0	{ 4 0 to 5 0	{ 6 0 to 10 0	{ 6 0 to 10 0	{ 6 0 to 10 0	Shahpur.
10 0	10 0	8 0	.....	.....	4 10 0	{ 4 11 to 5 10	{ 4 11 to 5 10	{ 4 11 to 5 10	{ 4 0 to 6 0	{ 4 0 to 6 0	{ 4 0 to 6 0	{ 7 0 to 16 0	{ 7 0 to 16 0	{ 7 0 to 16 0	Purneah.
11 0	11 0	12 0	3 4 0	3 7 0	3 0 0										Maidah.
10 0	9 0	10 8	.....	4 7 0											Southal Pergis.
ORISSA.															
14 0	14 0	13 0	2 12 0	2 12 0	3 0 0	5 10	5 10	5 10	4 0	4 0	4 0	{ 7 8 to 10 0	{ 7 8 to 10 0	{ 7 8 to 10 0	Cuttack.
14 0	14 0	14 8	2 12 0	2 12 0	2 12 0	7 0	7 0	7 0	5 0	5 0	5 0	{ 8 0 to 10 0	{ 8 0 to 10 0	{ 8 0 to 10 0	Pooree.
9 8	8 0	13 0	.....	.....	.....										Belasore.
CHOTA NAGPORE. South-Western Frontier Agency.															
9 0	9 0	10 0	3 16 8	3 16 8	3 12 4	5 0	4 0	4 4	5 0	5 0	5 0	8 0	8 0	8 0	Hazareebagh.
9 0	9 0	9 0	4 2 0	4 2 0	4 0 0	{ 3 0 to 4 8	{ 3 0 to 4 8	{ 3 12 to 4 8	{ 3 8 to 5 0	{ 3 8 to 5 0	{ 3 8 to 5 0	{ 6 0 to 12 0	{ 6 0 to 12 0	{ 5 10 to 12 0	Lohardanga.
8 0	8 0	8 0	4 0 0	4 0 0	4 7 0	3 0	3 0	3 0	4 8	4 8		{ 4 8 to 12 0	{ 5 0 to 12 0	{ 5 0 to 12 0	Singbhor.
10 8	10 0	11 0	3 9 0	3 7 0	3 12 0	4 11	3 12	4 11	4 0	4 0	4 0	10 0	10 0	10 0	Manbhoom.

23 In the interior retail prices of salt range from 10 to 12 seers.

24 In the sub-divisions retail prices of salt are as follow:—Bansura: 10 seers and Jamui 11 seers.

25 In the sub-divisions retail prices of salt are as follow:—Balka and Soop's 11 seers, and Muddelpura 10 seers.

26 In the sub-divisions retail prices of salt are as follow:—Kissungunge 8 seers and Arrarack (at Kausungunge) 11 seers.

27 In Khoorda retail price of salt 13 seers.

28 Retail price of salt at Bhadrak 10 seers.

29 Retail price of salt at Chutra 10 seers, and Khurrukdih 11 seers.

210 Retail price of salt at Maghanathpore 11 seers, and Burabazar 10½ seers.

Published for general information.

COLMAN MACAULAY,
Secy. to the Govt. of Bengal.

WHOLESALE PRICES-CURRENT of Food-grains, Firewood, and Salt in

Number.	MARTS.	PRICES PER MAUND														
		WHEAT.			BARLEY.			RICE, BEST SORT.			RICE, COMMON.			BULRUSH MILLER-CUMBOO, BAJRA		
		Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
		R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.
1	Calcutta ...	2 14 0	2 13 0	2 14 0	2 0 0	2 1 0	1 9 0	2 14 0	2 14 0	4 0 0	2 8 0	2 8 0	2 0 0	2 0 0	2 0 0	1
2	Seraingunge ...	1 13 0	...	...	4 0 0	...	...	2 4 0	...	...	...	...	...	...	...	...
3	Dacca ...	2 2 0	2 13 0	2 2 0	2 0 0	1 14 0	1 3 0	2 10 0	2 8 0	1 12 0	2 2 0	2 2 0	1 6 0	2 0 0	...	...
4	Naraingunge ...	...	...	...	...	...	...	2 3 0	2 4 0	1 10 0	2 0 0	2 2 0	1 8 0	...	...	...
5	Chittagong ...	2 0 0	2 0 0	4 2 0	...	...	...	2 14 0	2 14 0	2 11 0	2 0 0	1 12 0	1 8 0	...	...	...
6	Patna ...	2 2 0	2 3 0	2 4 0	1 8 0	1 3 0	1 2 0	2 11 0	2 11 0	3 5 0	2 0 0	2 0 0	1 12 0	...	...	...
7	Balasore ...	2 12 0	2 13 0	2 2 0	...	...	...	2 8 0	2 10 0	1 8 0	1 5 0	...	1 4 0	...	...	...
8	Pooree ...	...	...	...	...	...	...	...	...	...	2 2 0	2 2 0	1 9 0	...	...	...
9	Cuttack ...	2 0 0	2 4 0	2 10 0	...	...	...	2 0 0	2 10 0	2 2 0	1 10 0	1 9 0	1 6 0	...	...	...

CALCUTTA,
The 9th July 1883.

the undermentioned Marts of Bengal for the Fortnight ending 30th June 1883.

OF 40 BHEMS.

GRASS MILLS— CHOLU, JOWAR.			LARGE MILLS— RAOI OR MURWA AND CHENNA.			MAIZE OR INDIAN- CORE.			GRAM.			FINEWOOD.			SALT.			MARTS.
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	
R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	
...	...	1 8 0	...	...	...	1 8 0	1 8 0	1 10 0	2 4 0	2 4 0	1 13 0	6 6 8	6 6 8	6 6 8	2 12 0	2 12 0	2 10 0	Calcutta.
...	2 10 0	...	...	0 6 0	...	...	3 2 0	...	...	Barisal.
...	2 4 0	2 12 0	1 13 0	0 5 0	0 6 0	0 6 0	3 4 0	2 0 2	15 0	Dacca.
...	2 8 0	2 10 0	2 4 0	0 7 0	0 7 0	0 7 0	3 0 0	2 0 2	14 0	Narainpore.
...	3 0 0	3 0 0	2 8 0	0 5 3	0 5 3	0 10 6	4 0 0	0 0 2	14 0	Chittagong.
...	1 3 0	1 3 0	1 2 0	1 5 0	1 5 0	1 4 0	0 5 0	0 5 0	0 5 0	3 0 0	2 0 0	2 0 0	Patna.
...	2 12 0	2 12 0	2 8 0	0 5 4	0 5 4	0 4 0	4 8 0	0 5 0	2 0 0	Bahar.
...	2 12 0	2 12 0	2 12 0	Pooree.
...	2 10 0	2 0 2	10 0	...	...	...	2 2 0	2 0 0	1 10 0	0 8 0	0 8 0	0 4 0	2 12 0	2 12 0	2 0 0	Cuttack.

Published for general information.

COLMAN MACAULAY,
Secy. to the Govt. of Bengal.

Meteorological Report of the Province of Bengal

METEOROLOGICAL DIVISION	DISTRICT.	Representative station.	STATION OBSERVATIONS.													Average humidity at 10 A. M. for week.	Average cloud amount at 10 A. M. for week.
			AIR PRESSURE.			WIND.		TEMPERATURE.									
			Mean barometer height, 10 A. M.	Mean reduced to sea-level.	Variation from mean.	Prevailing direction.	Mean wind velocity miles per day.	Highest during week.	Lowest during week.	Mean maximum temperature.	Mean minimum temperature of week.	Mean daily temperature of week.	Variation from normal mean of week.	Mean 10 A. M. temperature.			
OCEAN.	Pooree	Gopalpore ...	29.610	29.640	—	S	271	85.0	76.8	80.7	78.5	79.0	—	80.4	85	8.1	
	Pooree	False Point ...	29.650	29.606	—0.027	NW	243	80.5	72.1	86.9	76.5	81.7	—1.3	82.8	80	8.6	
	Cuttack	Cuttack	29.653	29.614	—0.07	W	120	85.4	76.3	87.6	78.1	82.0	—1.3	83.5	79	8.1	
	Balasore	Balasore	29.630	29.607	—	NNW	117	86.4	76.2	86.8	77.5	81.8	—	83.8	84	8.4	
	South-West Midnapore	Saugor Island ...	29.667	29.633	—0.10	Variable	271	80.7	75.0	88.4	78.1	83.3	—0.9	85.2	78	8.0	
	South 24-Pergunnahs...	Midnapore	29.471	—	—	NW	?	91.5	73.8	87.9	76.6	82.0	—	85.2	80	6.8	
	24-Pergunnahs	Calcutta	29.586	29.607	—0.14	SE	161	90.5	71.2	87.0	76.8	81.0	—1.7	84.0	88	9.3	
	Howrah	Howrah	29.621	29.621	+0.13	Variable	120	82.6	78.4	89.1	79.2	84.2	—0.0	86.8	79	8.7	
	Hooghly	Hooghly	29.621	29.621	+0.13	Variable	120	82.6	78.4	89.1	79.2	84.2	—0.0	86.8	79	8.7	
	Burdwan	Burdwan	29.621	29.621	+0.13	Variable	120	82.6	78.4	89.1	79.2	84.2	—0.0	86.8	79	8.7	
SOUTH-WEST BENGAL.	Bankura	Bankura	29.621	29.621	+0.13	Variable	120	82.6	78.4	89.1	79.2	84.2	—0.0	86.8	79	8.7	
	Boerghoon	Boerghoon	29.298	—	—	NE	?	91.0	76.3	87.7	77.9	82.8	—	86.3	76	5.3	
	West Burdwan	West Burdwan	29.573	29.641	+0.025	ENE	155.9	82.7	78.9	88.5	78.4	83.5	—1.7	84.6	83	8.7	
	Moorsheadabad	Moorsheadabad	29.573	29.641	+0.025	ENE	155.9	82.7	78.9	88.5	78.4	83.5	—1.7	84.6	83	8.7	
	Nudda	Nudda	29.604	29.659	+0.03	Variable	154.5	82.4	78.2	89.9	78.9	83.9	—0.4	85.4	82	9.7	
	Jessore	Jessore	29.604	29.659	+0.03	Variable	154.5	82.4	78.2	89.9	78.9	83.9	—0.4	85.4	82	9.7	
	Khoolna	Khoolna	29.590	29.685	+0.10	SE	144	88.2	75.5	84.0	70.5	80.3	—1.7	83.0	80	5.3	
	Chittagong	Chittagong	29.590	29.685	+0.10	SE	144	88.2	75.5	84.0	70.5	80.3	—1.7	83.0	80	5.3	
	Chittagong Hill Tracts	Denagari	—	—	—	Observatory not recorded.											
	Backerganj	Backerganj	—	—	—	Observatory commenced, 2nd July.											
EAST BENGAL.	Noakholly	Noakholly	—	—	—	Observatory not commenced.											
	Furzedpore	Furzedpore	—	—	—	Observatory commenced, 5th July.											
	Dacca	Dacca	29.622	29.658	+0.10	SE	117	89.8	76.2	86.5	75.8	82.1	—1.6	85.4	80	6.4	
	Commillah	Commillah	29.626	29.682	—	SE	?	85.6	74.3	83.8	75.8	79.8	—	83.8	78	6.4	
	Mymensingh	Mymensingh	29.630	—	—	ESE	223	82.3	76.0	88.0	77.8	83.2	—	85.0	75	6.3	
	Boys and Pubna	Serajgunj	—	—	—	Observatory not commenced.											
	Rajshahy	Rainpore Beaulah ...	29.568	29.642	—	W	319	94.6	75.5	91.5	79.2	85.4	—	85.1	83	5.1	
	Dinagore	Dinagore	29.531	—	—	SE	168	92.0	77.1	89.5	79.8	84.0	—	85.8	78	6.6	
	Rangpore	Rangpore	29.018	—	—	SE	137	92.8	76.5	91.2	78.1	84.7	—	86.3	78	5.7	
	Julpigore	Julpigore	29.324	—	—	?	127	92.9	76.1	90.3	77.8	84.1	—	85.3	76	5.1	
NORTH BENGAL.	Cooch Behar	Cooch Behar	—	—	—	?	127	92.9	76.1	90.3	77.8	84.1	—	85.3	76	5.1	
	Darjeeling Hill Districts	Darjeeling	29.634	—	—	E	93	89.1	80.1	84.0	80.7	81.6	—	83.2	92	6.7	
	Purneah	Purneah	29.518	29.643	+0.027	Calm	55	96.2	76.8	91.1	78.9	85.1	+0.6	85.2	78	7.0	
	North Bhagulpore	North Bhagulpore	—	—	—	Observatory commenced, 8th July.											
	Moanserpore	Moanserpore	29.478	29.644	+0.046	ESE	134	83.4	78.5	80.8	80.6	83.1	+0.6	86.1	80	6.4	
	Durbhunga	Durbhunga	—	—	—	ESE	—	94.1	?	87.4	?	?	—	87.2	70	5.6	
	Chumprun	Chumprun	—	—	—	E	60	95.5	74.0	91.9	78.5	85.3	—	86.6	95	5.8	
	Sarun	Sarun	29.422	—	—	Variable	?	98.4	69.0	89.0	70.1	79.8	—	86.3	73	6.3	
	Shahabad	Shahabad	29.581	29.632	—	NW	226	98.9	76.2	94.3	79.2	85.7	—	88.9	92	6.7	
	Gya	Gya	29.290	29.613	+0.16	Variable	163	90.2	71.8	94.3	74.0	84.2	—0.3	88.0	68	5.9	
SOUTH BENGAL.	Patna	Patna	29.416	29.639	+0.050	Variable	163	90.0	78.7	93.2	80.3	86.8	+0.0	84.9	74	8.0	
	South Bhagulpore	South Bhagulpore	29.486	29.639	—	Calm	140	94.9	77.0	80.9	78.5	84.3	—	86.9	76	5.9	
	Monghyr	Monghyr	—	—	—	Observatory commenced, 8th July.											
	Sonthal Pergunnahs	Sonthal Pergunnahs	—	—	—	Observatory commenced, 8th July.											
	Hazaribagh	Hazaribagh	27.638	29.625	+0.034	NW	281	89.0	70.7	85.7	72.2	79.0	—1.1	80.3	76	6.7	
	Lohardugga	Lohardugga	—	—	—	Observatory not commenced.											
	Manbhoon	Manbhoon	—	—	—	Observatory not commenced.											
	Kingbhoon	Kingbhoon	—	—	—	ditto.											
	—	—	—	—	—	ditto.											
	—	—	—	—	—	ditto.											

Explanation of Summary.—The normal means of air pressure and temperature are the arithmetical averages or means of the readings during the same. The humidity of the atmosphere is expressed as a percentage, saturated air being represented by 100. A clear sky is denoted by 0 and an overcast sky by 100. The normal means of the rainfall are the numerical means or averages of the rainfall in that district determined from the returns sent in by the sub-divisions from that district, (i.e.) the total rainfall at the sub-divisional stations in the district sending in returns divided by the number of stations. A rainy day is denoted by a dot.

for the week ending 6th July 1883.

Rainfall of week at observing station.	DISTRICT OBSERVATIONS.										Representative station.	DISTRICT.	METEOROLOGICAL DIVISION.
	RAINFALL.												
	Of week.		Since 1st of month.			Since 15th May.			Average number of rainy days during the week.	Normal number of rainy days of week.			
	Normal mean for district.	Average for district.	Mean for district.	Normal mean.	Variation.	Mean for district.	Normal mean.	Variation.					
7.00											Gopalpore	POOROE	ORISSA.
4.58	2.55	6.03	21.39	11.03	+10.36	22.04	12.01	+9.43	4.5	4.2	False Point		
5.29	2.79	4.82	15.86	11.14	+4.72	10.66	12.06	+6.70	8.5	3.8	Cuttack			Cuttack
5.29	2.23	5.90	10.42	9.42	+10.00	20.77	11.81	+8.96	5.0	4.0	Balasore	Balasore	SOUTH-WEST MIDNAPORE
5.02	2.60	6.36	14.21	12.10	+2.02	10.47	14.34	+1.84	5.3	4.5	Rangor Island	South 24-Pargunnahs	
5.14	2.65	3.07	9.22	12.07	-2.85	9.72	14.20	-4.78	4.7	3.9	Midnapore	Midnapore	
4.43	2.32	3.06	13.05	11.05	+1.10	14.09	15.02	-0.93	5.5	4.9	Calcutta	24-Pargunnahs	SOUTH-WEST BENGAL.
1.07	2.10	1.04	9.25	10.92	-1.67	13.62	13.17	+0.45	4.3	3.8	Burdwan	Howrah	
	2.02	2.39	14.83	12.81	+2.02	17.33	14.44	+3.09	4.6	4.3	Raniganj	Hooghly	
1.20	2.78	1.07	10.57	12.02	-1.45	14.70	14.47	+0.22	4.3	4.2	Herchampore	Bankooro	SOUTH-WEST BENGAL.
	2.45	1.58	9.31	12.55	-3.24	12.70	16.00	-3.30	3.0	4.0		Bourbhoom	
2.22	2.48	2.50	10.95	14.08	-4.03	13.32	18.50	-5.27	4.8	4.7	Jessore	West Burdwan	
5.29	3.53	4.05	40.44	34.12	+12.32	54.30	39.48	+15.08	6.5	5.9	Chittagong	Jessore	EAST BENGAL.
	2.80	1.54	20.31	22.04	-1.73	21.87	26.08	-1.21	3.5	5.6	Dumaguri	Khoolna	
	3.88	3.16	17.99	24.20	-6.21	20.72	28.00	-7.28	5.5	5.9	Barrisal	Chittagong Hill Tracts	
	4.30	1.72	42.00	31.88	+10.18	44.80	37.73	+7.16	3.6	5.8	Noakholly	Backergunj	EAST BENGAL.
	2.68	1.16	8.43	15.38	-6.95	12.32	10.04	-7.62	3.3	4.8	Furreedpore	Noakholly	
1.18	2.56	0.69	8.45	15.74	-7.28	11.74	20.44	-8.70	4.0	4.6	Dacca	Furreedpore	
2.09	2.80	2.10	18.37	20.30	-1.93	20.30	25.00	-1.70	4.5	5.0	Commillah	Dacca	NORTH BENGAL.
0.16	3.03	0.04	0.70	19.01	-9.01	14.20	24.87	-10.67	2.1	4.3	Mymensingh	Commillah	
	2.04	0.74	0.45	14.73	-5.23	14.63	18.75	-4.12	2.0	4.0	Surejgunj	Mymensingh	
0.92	3.11	1.03	9.25	13.24	-4.29	13.43	13.31	-2.88	3.7	4.2	Rampore Beaulah	Bogra and Pubna	NORTH BENGAL.
0.38	3.28	0.44	11.24	16.57	-7.33	14.77	21.04	-6.87	2.0	4.1	Dinagopore	Rajshahye	
0.06	3.74	0.71	14.07	24.00	-10.23	17.06	32.00	-15.03	1.3	3.7	Rungpore	Dinagopore	
1.00	4.21	0.02	25.78	30.26	-10.28	32.03	45.00	-13.83	1.3	4.7	Julpigoree	Rungpore	NORTH BENGAL.
4.26	10.19			45.61			54.40				Cooch Behar	Julpigoree	
	3.31	1.05	24.01	14.34	+10.27	25.52	10.64	+9.18	2.8	4.1	Darjeeling	Cooch Behar	
	3.01	1.08	24.01	14.34	+10.27	25.52	10.64	+9.18	2.8	4.1	Purneah	Darjeeling Hill Districts	NORTH BENGAL.
												Purneah	
												North Bhawalpore	
0.32	2.81	1.06	16.17	9.83	+6.35	18.01	11.00	+7.01	2.5	3.3	Durbhunga	Moanerpore	NORTH BENGAL.
4.41	2.36	3.00	8.42	10.08	-2.51	10.09	12.03	-2.03	3.0	3.3	Mothhari	Durbhunga	
3.74	2.30	2.74	12.47	8.82	+3.65	12.60	9.72	+2.88	3.0	3.6	Chupra	Chumpanun	
2.41												Saran	NORTH BENGAL.
1.05	2.27	1.74	0.10	7.27	+1.83	9.61	7.70	+1.82	3.2	3.9	Dohroo	Shahabad	
1.00	2.59	2.49	18.07	7.96	+5.11	13.79	9.23	+4.57	3.8	3.6	Buxar	Shahabad	
0.76	3.08	1.61	18.08	6.07	+9.41	16.14	9.97	+6.17	3.3	3.3	Gya	Gya	NORTH BENGAL.
0.28	2.84	0.72	11.80	9.26	+2.54	12.49	10.54	+1.85	1.6	4.2	Bankipore	Patna	
	2.80	1.28	12.43	11.98	+0.51	14.37	15.62	+0.73	3.7	4.3	Bhawalpore	Patna	
4.40	2.94	3.69	10.25	10.82	-0.57	10.93	11.33	-1.40	5.0	4.9	Hazaribagh	South Bhawalpore	NORTH BENGAL.
	2.45	4.50	14.96	9.99	+4.97	16.54	11.26	+5.18	5.3	4.7	Nya Doozka	Monghyr	
	2.03	5.80	11.80	15.04	-2.34	12.71	16.10	-3.45	6.0	4.9	Hazaribagh	South Bhawalpore	
												Hazaribagh	NORTH BENGAL.
												Lohardugga	
												Manbhoom	
												Singhbhoom	NORTH BENGAL.

period for the past 12 years. The variations are negative when the mean for the week is less than the corresponding normal mean and positive when greater. The number denoting cloud amount represents the part of the sky covered, the whole sky being denoted by 10. Under the head "district observations" stations for the period in question during the past 12 years. The "means for the district" are the numerical averages of the rainfall returns received day by day on which at least an hundredth of an inch fell.

Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 6th of July 1883.

Meteorological division.	District.	Station.	RAINFALL.							Total.		Total rainfall from 1st June to 6th July.	Average total rainfall from 1st June to 6th July.	Total rainfall since 10th May.	Average rainfall from 10th May to date.
			Sunday, 30th June.	1st Sunday, July.	2nd Sunday, July.	3rd Sunday, July.	4th Sunday, July.	5th Sunday, July.	6th Sunday, July.	Number of rainy days.	of Rainfall weeks.				
CHITTAGONG	Purboe	Purboe	2.35				0.23	4.28	0.88	4	7.04	23.03	9.01	24.28	10.53
		Khurdah	1.00				0.08	0.10	0.70	5	0.92	24.21	11.31	24.80	10.01
		Banpur	3.88				0.20	1.00	2.20	4	8.18	15.60	11.10	16.48	12.24
		Fabo Point	1.10	0.05				0.00	0.80	5	5.40	23.60	12.10	24.01	10.22
	Cuttack	Jagatsinghpore	0.30				0.00	3.08	0.10	4	4.33	25.31	12.28	30.21	13.07
		Cuttack	3.71					0.71	1.02	3	5.44	15.79	12.32	18.12	15.03
		Kendrapara	1.80					0.00	1.01	3	2.80	10.38	13.20	20.71	13.07
		Jalpoore	3.15					0.10	1.50	4	0.60	10.38	13.20	20.71	13.07
	Balasore	Shandhal	5.50	0.20			0.50	2.20	0.01	4	6.40	22.03	8.20	30.78	12.04
		Shandhal	3.85				0.10	1.00	0.01	4	6.82	19.54	10.42	25.34	10.54
		Sorah	2.60	0.12		0.20	0.30	0.00	0.30	6	4.12	15.00	7.07	19.72	10.04
		Je Isore	5.61	0.17	0.21	0.70	0.40	0.38	0.38	7	7.70	10.75	9.20	23.43	11.03
SOUTH-WEST BENGAL.	Midnapore	Contai	0.52		0.35	2.70	0.11	0.08	1.01	6	5.70	15.01	12.03	19.04	14.97
		Sagar Island	0.55			1.08	3.82	0.18		4	5.44	17.22	14.09	18.64	15.08
		Tumlook	0.80				0.00	0.00		3	2.30	9.00	9.00	18.14	13.14
		Midnapore	1.24	0.05		0.30	0.24	0.03	0.00	6	3.16	9.18	11.75	10.54	13.01
	24 Pergunnahs	Chital	1.21			0.80	0.22	0.20	0.07	5	2.50	9.60	13.03	9.73	10.37
		Diamond Harbour	0.89	0.10		0.81	0.78	1.55	0.74	6	4.87	9.70	12.43	10.83	15.14
		Alipore Jail	0.85				2.50	0.02	0.10	4	4.10	12.83	12.50	13.25	15.51
		Harnackpore	0.70			1.10	0.02	0.10	0.30	5	3.21	12.80	12.94	13.01	15.40
	Howrah	Dum-Dum	0.80	0.05		0.60	4.25	0.02	0.10	6	0.37	14.07	12.12	15.64	15.64
		Banaset	0.05	0.00		1.45	0.82	0.00	0.00	5	4.80	13.10	11.80	14.83	14.83
		Duseerhat	1.50	0.20	0.04		3.20	0.18	0.17	6	5.36	17.82	13.21	19.52	16.51
		Howrah	0.62			0.33	1.77	0.30	0.22	5	3.34	11.02	12.25	12.60	14.86
	Hooghly	Moheeraka	0.50	0.11	0.05	1.25	0.01	0.80	0.23	7	3.88	11.84	11.08	12.25	15.38
		Serampore	0.81	0.05	0.04	0.47	0.08	0.27	0.14	7	2.70	12.81	11.72	13.07	14.08
		Hooghly	0.71			0.25	0.82	0.73	0.27	6	2.94	10.70	10.74	13.24	13.74
		Johanabad	0.88	0.23		0.00			0.38	4	2.43	11.42	12.27	12.42	15.40
	Burdwan	Culna	0.50			0.33	0.20	0.07	0.32	5	1.54	9.31	10.75	12.07	12.01
		Burdwan	0.70	0.11	0.03	0.01	0.01			5	0.85	12.27	10.01	13.25	13.25
		Culna	0.25			0.25	0.03			3	0.64	6.19	11.05	12.75	13.04
		Rancegunge	0.20	0.40		2.20	0.20			4	5.00	21.38	9.05	25.48	10.53
	Bankura	Bankura	0.86	0.00	0.00	1.15		0.10	0.11	6	3.11	9.45	12.13	10.70	14.38
		Kishorepore	1.50		0.00				1.12	3	2.07	19.07	14.47	16.01	16.14
		Mahara	0.25			1.47	0.12		0.11	4	1.85	10.83	13.54	15.10	15.51
		Khatra	0.11		0.01	0.00		0.00	0.10	5	1.00	10.50	13.75	12.93	15.31
	Hoerbhoom	Bh. Soory	0.21		0.52	1.05		1.04	0.00	5	2.91	21.01	12.07	25.60	15.70
		Holam, ore		0.10	0.02	0.20		0.05	0.08	5	0.87	8.06	14.00	12.64	16.18
	Nuddea	Boneong	0.10				1.20	0.55		3	2.15	10.00	13.45	13.08	16.06
		Ranghat	0.38	0.20		1.26	0.50	0.05	0.05	6	2.74	13.10	11.00	15.30	11.37
		Keshinghur					0.26			1	0.26	3.80	11.07	6.48	13.03
		Choudanga	0.19					0.50	0.20	3	0.80	4.00	12.15	8.19	10.71
	Kheolna	Meherpore	0.22				1.72			2	1.74	9.74	12.40	14.70	15.12
		Koohita	0.04			0.08	0.81			3	1.63	13.11	14.23	18.82	16.13
	Je-sore	Sakira	0.87		0.00	0.30	3.85	0.00	0.11	6	0.07	10.72	14.75	20.88	18.00
		Bagirhat	0.68	0.21			0.15	1.25		5	1.70	17.00	17.00	21.43	21.43
		Kheolna	0.00	0.15			1.05	0.50	0.05	6	2.50	14.10	14.07	13.25	18.04
		Narail	0.16				0.11	0.21		3	0.38	6.04	13.70	12.27	17.20
	Mooredabad	Jessore	0.49	0.03	0.04	0.02	0.05	0.15	0.05	7	1.53	8.14	15.40	10.20	10.20
		Jhendish	1.20				0.80	0.13	0.02	4	2.28	7.04	15.74	11.85	18.01
		Magorah	0.00				0.00		0.12	4	2.10	12.04	13.27	14.53	17.26
		Kandi		0.20		0.60	0.40			3	1.20	10.80	12.55	14.03	14.82
	Chittagong	Rampore Haat	0.04	0.02				0.52	0.38	4	0.90	10.21	12.00	17.50	15.20
		Berhampore	0.11	0.47		0.13	0.35	0.04	0.04	6	1.14	9.51	13.00	15.01	15.01
		Lalgha	0.18				0.70			2	0.97	8.47	11.10	12.45	13.45
		Azimungo	0.16	0.04	0.01	0.04	0.25	0.04	0.04	6	0.58	9.00	14.00	15.00	15.77
	Noakhally	Jungipore	0.15	0.15		1.85	0.08	0.04		4	2.12	11.20	11.23	14.00	14.00
		Lalgola	0.08	0.05		0.17	0.22		0.04	5	0.54	8.58	11.87	12.77	13.01
	Chittagong Hill Tracts.	Cox's Bazar	4.20	0.50	0.00	0.17	1.23	0.43	0.02	7	6.00	51.80	41.43	50.08	47.15
		Chittagong	0.65	0.40	0.01	0.15	0.07	0.00		6	1.41	58.52	26.70	47.71	51.74
	Backergunge	Rangamati	0.16		1.40	0.15				3	1.71	20.21	22.41	23.04	27.06
		Ruma	0.32	0.04	0.55	0.00				4	0.97	21.74	21.05	20.33	24.01
		Akrotira	0.30			2.04	0.12	0.10	0.15	5	2.70	17.60	10.01	21.24	20.01
		Patunkhally	1.86		1.00	0.05		0.00	0.20	5	3.40	20.50	27.00	23.00	30.07
	Farrukh	Perampore	1.00	0.08	0.00		0.30	1.10	0.00	6	3.94	17.43	20.85	18.70	23.05
		Burrial	2.05	0.10		0.02	0.20	0.43	0.04	6	3.44	13.60	19.85	18.21	24.21
		Bloria	1.07	0.06									28.50	28.50	33.10
		Noakhally	0.88	0.15		1.08	0.07	0.72		5	2.40	42.82	31.57	47.57	37.10
	Farrukh	Fenny	0.22			0.82				2	1.04		32.10	45.38	45.38
		Madripore	1.15				0.14	0.21		3	1.50	8.34	15.60	12.50	20.37
		Farrukh	0.61	0.09			0.10	0.22		4	1.41	6.74	15.70	10.70	20.81
		Goulundo	0.40	0.20			0.25			3	0.85	10.02	14.78	13.78	18.65
	Dacca	Madripore		0.09		0.00	0.08	0.11		4	0.84	8.41	10.50	11.00	24.03
		Dacca	0.10	0.02			0.75	0.07		4	0.82	4.83	12.05	9.29	20.51
		Manickgunge	0.27	0.10			0.15	0.10		4	0.82	4.83	12.05	9.29	20.51
	Comilla	Comilla	0.02	0.07		2.21		0.04		4	2.34	23.07	20.00	25.75	25.04
		Chandpore	0.75			0.05	0.00	0.15		4	2.15	10.70	20.70	20.70	20.15
		Brahmanbaria		0.27		0.70	0.15	0.05	0.15	5	1.37	9.08	17.40	18.27	22.52
	Mymensingh	Kishoregunge							0.22	1	0.22	22.24	22.24	27.00	27.00
		Mymensingh								1	0.06	0.00	16.70	20.00	20.00
		Jamshaidpur	0.10	0.18		0.04		0.20		4	0.47	8.04	17.17	11.83	21.07

Exposition indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If some of the returns are missing, the corresponding spaces in the total rainfall columns are left blank.

Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 6th of July 1883—concluded.

Meteorological division.	District.	Station.	RAINFALL.							TOTAL.		Total rainfall from 1st to 6th July.	Average total rainfall from 1st to 6th July.	Total rainfall since 1st May.	Average rainfall from 1st May to date.
			Saturday, 30th June.	Sunday, 1st July.	Monday, 2nd July.	Tuesday, 3rd July.	Wednesday, 4th July.	Thursday, 5th July.	Friday, 6th July.	Number of rainy days.	of Rainfall week.				
NORTH BENGAL	Pubna	Pubna	0.51	0.12			0.87			3	1.50	10.94	14.19	13.98	18.97
		Seraingunge	0.08				0.25			2	0.31	8.77	13.02	10.47	17.08
	Bogra	Sherpore				1.80				1	1.80	7.00	14.47	9.72	20.33
		Nowkhilla	0.06	0.04			0.31	0.04		4	0.45	6.39	15.32	9.31	18.63
		Bogra					1.08			1	1.08	8.00	17.37	11.90	22.05
		Panchbibi					0.41			1	0.41	19.04	14.69	12.61	18.17
	Rajahmhye	Bondab	0.50	0.00			0.49	0.20	0.17	5	1.35	7.55	12.71	10.56	15.96
		Natore	0.50				1.10		0.10	3	1.70	5.55	14.18	10.52	17.20
	Maldah	Maldah	0.08	0.02		0.03				3	0.13	0.73	11.75	12.01	15.70
		Mohadebore	0.09				0.05			2	1.04	7.20	20.47	10.01	23.77
	Dinapore	Chinamon	0.13					0.20		2	0.33	11.33	15.72	13.92	16.40
		Raigunge						0.12	0.04	2	0.16	12.61	18.56	14.54	22.40
		Dinapore					0.22		0.02	2	0.24	13.15	20.48	16.21	24.27
		Rungpore	0.14		0.30		1.40			3	1.84	17.78	18.20	23.35	23.56
	Julpigore	Rungpore					0.04			1	0.04	10.32	21.74	17.27	31.20
		Kurigram					0.05			1	0.05	16.08	23.33	23.67	31.63
		Bagdogra								1	Nil	17.80	32.28	23.14	41.18
	Cooch Behar	Julpigore					0.36	1.46	0.07	3	1.89	35.74	33.97	43.13	50.00
		Dinhat		0.01			0.03		0.03	3	0.40	15.97	24.32	24.09	45.00
		Mickligunge					0.05			1	0.05	26.34	41.04	35.15	50.00
NORTH BHAR	Darjeeling Hill.	Boze	0.24		0.22			1.00						60.71	74.94
		Darjeeling	0.45	0.42	0.56	0.33	0.32	0.72					30.66		34.61
		Kisaurunge				0.10								10.07	22.93
	Purneah	Arraresh					0.60	0.32		2	0.92	20.74	16.84	30.40	19.27
		Purneah					1.58	0.01		2	1.59	11.60	15.61	12.94	16.08
	North Bhagulpore.	Madapore		0.07		0.22				4	2.18	21.60	9.91	50.00	11.85
		Seepool	0.03					0.06	0.01	3	0.10	23.82	1.26	24.07	12.70
	Durbhunga	Tajpore				0.20	0.36		0.10	3	0.81	15.00	0.00	15.01	10.14
		Durbhunga						0.32		1	0.32	10.42	14.44	20.30	11.55
		Madhubani					0.58	1.03	0.10	3	1.71	10.01	10.55	17.78	12.14
	Mozufferpore	Sitamarhi					0.70	1.34		2	2.04	10.00	10.38	10.05	11.70
		Mozufferpore	0.05			0.03		0.79		3	0.87	10.91	9.34	21.00	10.51
		Hajipore				0.05		0.12	0.42	3	0.63	10.24	8.78	10.31	9.57
	Ohumparun	Motibari				1.50		2.42	0.88	3	4.80	9.98	0.86	11.71	11.17
		Bettish				0.02	0.10	2.05	2.00	4	5.27	10.01	11.57	11.24	12.93
		Gopalgunge						0.05	0.05	2	0.10	5.20	11.40	7.11	12.02
		Sewan				0.04		1.09	1.57	3	1.50	9.08	10.03	9.33	11.20
SOUTH BHAR	Shahabad	Chuprah				0.32		1.35	2.30	3	3.97	15.84	7.61	15.84	8.24
		Bozar	0.03				0.03	0.20	1.27	4	1.50	9.20	0.61	9.41	7.00
		Dohree	0.10				1.22	1.00	1.30	4	3.71				
		Huhooah	0.30				0.60	0.60	1.30	3	0.00	8.00	7.08	3.00	8.07
		Sasseram	0.23				0.07	0.02	0.30	4	1.01	0.23	7.12	10.13	7.03
	Gya	Arrah					0.05	0.02	0.02	2	0.07	12.29	7.65	12.35	8.43
		Aurangabad					1.42	0.82	0.80	3	3.04	11.42	7.02	13.04	8.82
		Gya	0.01			0.03	0.09	1.80	0.05	5	2.00	10.87	8.13	18.40	9.32
		Nowadah		0.30	0.40	0.14		1.15	0.31	5	2.82	10.80	8.00	11.56	10.17
		Jehanabad				0.40		1.09		2	2.10	13.42	0.91	13.42	8.00
	Patna	Patna	0.06				0.04	0.55	0.17	4	0.82	13.50	9.23	15.74	10.00
		Chhapra				0.10		1.00	0.20	3	1.30	12.35	8.83	12.40	9.74
		Behar			0.13	1.79		0.64		3	2.50	28.01	8.45	28.61	9.00
		Barh					0.01	0.01	1.33	3	1.35	15.74	8.18	16.79	9.47
	Monghyr	Begoesari						0.18	1.14	2	1.30	20.95	8.43	22.00	9.00
		Monghyr				0.03	0.03			2	0.11	8.03	9.35	10.25	10.01
	South Bhagulpore.	Jamul							0.32	1	0.32	7.05	9.10	7.17	10.15
		Bhagulpore					0.11			1	0.11	14.04	8.70	15.32	10.21
	Sonthal Pergunnahs.	Bauka				0.13	1.05			2	1.18	7.35	10.45	7.55	10.00
		Rajmehal					0.47			1	Nil	7.48	15.80	8.06	15.78
		Gonda	0.05							3	2.03	7.30	0.00	8.25	10.78
		Pakeur	0.20			0.57				2	0.77	17.98	14.00	24.05	15.78
		Nya Doomka	0.23	0.46	0.11	0.54	0.23	0.05	0.04	7	1.70	10.46	11.00	10.94	15.78
CHUTIA NAG-POR.	Hazaribagh	Daghar	0.00	0.07		0.14	0.02		0.05	5	1.37	13.44	11.64	15.63	13.64
		Jaintara	0.53	0.33		0.00	0.10	0.21		5	1.31	12.57	10.84	13.10	12.63
		Pachamba	0.12		0.50	0.04	0.05		0.30	5	1.01	8.05	10.00	9.11	12.61
		Hazaribagh	0.09	0.18	0.09	2.10	0.04	1.51	0.03	7	5.04	11.01	9.81	13.13	11.14
	Lohardugga	Santugurh	0.43			0.03	1.10		0.21	4	2.37		12.71	13.18	11.24
		Mahuda Hills	0.22			2.00	3.03	0.22					9.72		
		Ranchi	1.15	0.38		2.04	1.11	1.30	0.37	6	6.35	18.09	10.18	20.46	11.00
	Singbhoom	Palanow				0.00	0.00	2.00		2	3.10	8.41	8.00	8.00	9.17
		Chyebassa	2.20		0.00	0.12	1.00	0.45	0.00	6	5.86	11.00	10.45	12.71	12.71
	Manbhoom	Purulia	0.04	0.32	0.11	3.40	1.70	0.24	0.08	7	6.62	10.88	10.63	21.51	11.93
		Gobindpore	0.24	0.15		0.00	0.84	0.28		5	1.54	8.50	10.78	10.08	11.80

Explanation—indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If some of the returns are missing, the corresponding spaces in the total rainfall columns are left blank.

SUMMARY OF METEOROLOGICAL AND RAINFALL OBSERVATIONS TAKEN IN BENGAL FOR THE WEEK ENDING FRIDAY, 6TH JULY 1883.

At the commencement of the past week a cyclonic vortex, which had been forming for several days previously near the Sandheads, began to move to the westward. It crossed the Balasore coast a little before midnight of Friday, and advanced across the North Orissa Hills into the Central Provinces on Saturday morning, whence it drifted slowly across the head of the Peninsula to Guzerat, and finally disappeared near the coast of the Arabian Sea. Strong southerly winds blew across the Bengal coast on Saturday. They diminished in strength on Sunday, and were feeble on Monday. Temperature hence increased over the whole of the Province, and winds became light and variable in North Bengal and over nearly the whole of Behar.

In consequence of the weakness of the Bay of Bengal monsoon winds on Monday, westerly dry winds from the North-Western Provinces advanced down the Gangetic valley on that day, and were established for a short time on Tuesday over Chutia Nagpur and South Behar. Another cyclonic vortex began to form at the same time near the head of the Bay. Its existence was first indicated on Tuesday morning by the setting in of northerly winds at Saugor Island and Balasore. This cyclonic vortex turned out to be very much smaller and feebler than the vortex of the preceding week. It formed near the coast of the Sunderbuns, probably south of the Mu'lah and near the Sandheads. It was stationary on Tuesday and Wednesday, and began to move slowly westwards on Thursday evening towards the Balasore coast, which it crossed on Saturday evening. Hence in every respect, except intensity, it was almost identical in its features and motion with the storm of the previous week. It gave moderately heavy rain to Orissa and the southern districts of South-West Bengal, and moderate rain to the southern districts of East Bengal. The indraught to this and the previous cyclonic vortex from North Bengal has been attended with diminished rainfall over the whole of Central Bengal. The rainfall in Nuddea, Furreedpore, Dacca, Mymensingh, Pubna, Bogra, Maidah, Rajshahye, and Rungpore has hence been unusually small in amount during the past week. Behar and Chutia Nagpur continue to receive satisfactory rain.

The variations from the normal of the elements of meteorological observation have as usual during periods of cyclonic disturbance been considerable and irregular. The mean pressure for the week is slightly below the average for stations in Orissa and the adjacent districts of South-West Bengal and above it elsewhere excepting Chittagong. The mean temperature of the week was below the average, except in South Behar. The average deficiency slightly exceeded 1° in Orissa, Bengal and Chutia Nagpur. The excess in the case of South Behar was mainly due to the high temperature which prevailed for a short time on Monday and Tuesday when dry westerly winds were blowing. High maximum temperatures were recorded at that time, the highest being 99·2° at Gya and 98·9° at Buxar. South-easterly winds have prevailed during the week in East Bengal, North Bengal and Behar. Winds have been variable in South-West Bengal, North Orissa, and Chutia Nagpur over which northerly winds of indraught to the cyclonic vortex continued from Tuesday until Friday morning.

The following table gives a summary of the temperature and rainfall data of the past week for each of the seven meteorological divisions of the Province:—

METEOROLOGICAL DISTRICT.	TEMPERATURE.						RAINFALL.							
	Highest observed during week.	Lowest observed during week.	Average for week.			Average mean of week above (+) or below (−) normal mean week.	Of week.			Rainy days.			Since 1st of month.	Since 1st May.
			Of highest of each day.	Of lowest of each day.	Of mean for each day.		Average.	Normal average.	Variation.	Average number for week.	Normal average num- ber for week.	Variation from week.		
Orissa	95·4	72·1	85·4	77·7	81·5	−1·3	5·90	2·47	+2·43	4·7	4·0	+0·7	18·24	10·40
South-West Bengal	92·3	71·2	85·1	77·9	83·1	−1·1	2·57	2·63	+0·14	4·6	4·4	+0·2	18·15	15·29
East Bengal	92·3	74·3	85·7	77·0	81·4	−1·7	1·88	3·18	−1·30	4·1	5·1	−1·0	16·75	22·48
North Bengal	94·0	75·5	89·6	78·4	84·5	...	0·78	3·40	−2·62	2·0	4·3	−2·3	16·11	23·65
North Behar	96·18	68·0	92·2	76·4	81·3	0	1·94	2·80	−0·86	2·8	3·6	−0·8	18·64	9·41
South Behar	96·12	74·0	90·1	79·3	86·1	+0·5	1·56	2·81	−1·25	3·1	4·0	−0·9	11·17	16·45
Chutia Nagpur	89·0	70·7	86·7	72·2	79·5	−1·1	4·15	2·62	+1·53	5·3	4·8	+0·5	11·83	11·68

The returns show that rain was very unequally distributed over the Province during the week. Orissa, the Midnapore, 24-Pergunnahs, Howrah, Hooghly, Jessore, and Khoolna districts of South-West Bengal, and Chutia Nagpur received abundant rain. It was deficient in every other part of the Province, excepting the Champaran and Saran districts of North Behar. The deficiency was most marked in North Bengal, where an average of only 22 per

cent. of the normal rainfall was received. The following table shows the districts in which the deficiency was largest :—

District.	Average rainfall of week.	Normal average of week.	Deficiency.	Ratio of actual to average rainfall.
Dacca	0.89	2.56	1.67	34 per cent.
Mymensingh	0.64	3.03	2.39	21 „
Bogra and Pubna	0.74	2.64	1.90	28 „
Rajshahye	1.03	3.11	2.08	36 „
Dinagapore	0.44	3.26	2.82	14 „
Julpigori	0.62	4.21	3.59	15 „
Rungpore	0.71	3.74	3.03	19 „

Saturday, 30th June.—Pressure had risen generally. The rise was very large in South-West Bengal, and more especially at Saugor Island. It had fallen only at Cuttack, Gya, and Hazaribagh, the fall being largest at the former station. These changes accompanied the westward motion of the cyclonic vortex which crossed the Balasore coast late in the evening of the 29th, and was at 10 a.m. of the 30th advancing across the North Orissa hills into the Central Provinces. The variations of the pressure from the normal were considerable, ranging from +.07 at Dacca to −.23" at Cuttack. Temperature was below the average over the whole province. The mean temperature of the past 24 hours was 7° in defect in East Bengal, 5° in Orissa, 4° in South-West Bengal, 1° in Behar, and 5° at Hazaribagh. Unusually strong winds were blowing at the head of the Bay and in South Bengal. Southerly winds were now established over the whole of South Bengal. Easterly winds continued in North Bengal and Behar. The cyclonic circulation in Orissa and the adjacent districts of Chutia Nagpur and South-West Bengal was indicated by the prevalence of southerly winds at False Point, south-easterly winds at Calcutta, easterly at Burdwan, north-easterly at Hazaribagh, and westerly at Cuttack. The air was very moist and skies were overcast in East and South-West Bengal, Orissa, and Chutia Nagpur. The cyclonic disturbance gave general rain to East and South-West Bengal, Orissa, and Chutia Nagpur. The indraught to it continued to diminish very considerably the rainfall in North Bengal and Behar, where a few light local showers of no importance fell during the past 24 hours. The rainfall, due to the cyclone, was excessive in Orissa and the adjacent districts of South-West Bengal. Balasore received 5.64 inches, and Cox's Bazar 4.29 inches.

Sunday, 1st July.—Pressure increased briskly over the whole province during the past day. The rise of the barometer was greatest at Cuttack. The depression had moved westward into the Central Provinces, and the centre at 10 a.m. was near Seoni. Pressure was above the normal of the day by amounts ranging from .01" at Cuttack to .1" at Durbhanga. Temperature was increasing with the diminution of cloud. The mean temperature of the past 24 hours was 3½° below the average in Orissa, South-West and East Bengal. Moderately strong monsoon winds were blowing this morning across the Bengal coast. The direction of the air motion was determined by the cyclonic vortex in the northern districts of the Central Provinces. Winds were south-easterly in East and South-West Bengal, and easterly in North Bengal, Behar, and Chutia Nagpur. The indraught to the vortex in the Central Provinces diminished considerably the amount of moisture in the air over Bengal. The sky was overcast at two stations in Behar, and was partially clouded over the remainder of the province. Light local showers of little importance fell in Orissa, South-West Bengal, East Bengal, and Chutia Nagpur. Little or no rain occurred in North Bengal or Behar.

Monday, 2nd July.—The barometer had risen in Orissa, Chutia Nagpur and South Behar during the previous 24 hours. It fell in other districts. The changes were nowhere large. Pressure was above the normal of the day at all stations, by amounts ranging from .03" at Saugor Island, to .08" at Cuttack and Durbhanga. Temperature was increasing, and was above the average, except in East Bengal. The mean temperature of the past 24 hours differed very slightly from the normal for the day except in South Bengal, where it was 2½° in excess. Light southerly winds were blowing at the head of the Bay today. Winds were light and variable in North Bengal. Strongish winds between south and east continued in South Behar and Chutia Nagpur. The air was generally drier, especially in Orissa, South Behar, and Chutia Nagpur. Skies were much less clouded in Bengal, and were overcast in Chutia Nagpur and the Gya district, and over the Darjeeling hills. A few light showers of no importance occurred in Orissa, South-West Bengal, and South-East Bengal. No rain fell over nearly the whole of Northern Bengal, Behar, and Chutia Nagpur.

Tuesday, 3rd July.—Pressure had increased generally by small amounts, and was above the normal, by amounts which ranged from .03" at Chittagong to 1.4" at Hazaribagh. Temperature increased rapidly with the continuation of the partial break in the rains. The mean of the past 24 hours was 4° above the average in Northern and Central Behar, 2½° in Orissa, and 1° in South-West Bengal and Chutia Nagpur. Winds were light and irregular. Westerly winds had extended during the previous 24 hours from the North-West Provinces into South Behar and Chutia Nagpur. In the north-west angle of the

Bay, the winds had shifted round to north-west, indicating the commencement of a cyclonic whirl at the head of the Bay. Winds varying in direction between south and east, prevailed in East and North Bengal, and North Behar. The westerly winds in South Behar and Chutia Nagpur caused a considerable decrease in the humidity. Skies were overcast at a few stations in Orissa and South-West Bengal. Elsewhere they are clear or lightly clouded. Fairly general rain was received in South-West Bengal and in Chutia Nagpur. Purulia registered 3·4 inches and Contai 2·89 inches. Local showers fell in East Bengal and the Chumparun, Patna, and Gya districts. Elsewhere little or no rain fell.

Wednesday, 4th July.—The barometer had fallen at the great majority of stations, rather rapidly in East Bengal, and more slowly in other districts. Pressure was below the normal at Chittagong, and above it at all other stations. The most important feature was the establishment of an area of slight barometric depression in the Sunderbuns and the adjacent part of the head of the Bay to the south of Jessore. Temperature was normal in South-West Bengal, Chutia Nagpur, and the southern districts of South Behar, and above it in other districts. The mean temperature of the past 24 hours was 1° above the normal in East Bengal, and from $2\frac{1}{4}^{\circ}$ to $4\frac{1}{4}^{\circ}$ above it in North and Central Behar. Winds were mainly dependent on the barometric depression in South Bengal. In Eastern Bengal they were south-easterly or easterly. In Orissa, Chutia Nagpur, and at the more western stations in South-West Bengal, they ranged in direction between north-north-west and west-north-west. Winds were variable and light in North Bengal and North Behar. The air was considerably damper in South Behar and Chutia Nagpur. The sky had clouded over again in Orissa and South-West Bengal, and was also thickly clouded or overcast in South Behar and Chutia Nagpur. It was nearly free from cloud in the western districts of North Behar. Rain fell in every division during the past 24 hours. General and moderately heavy rain was received in South-West Bengal and Chutia Nagpur. The rain showers were lighter in East and North Bengal and in South Behar, and the rainfall more local in character. Dum-Dum received 4·25 inches during the 24 hours preceding 6 p.m., Satkhira 8·85 inches, Saugor Island 3·82 inches, and Busseerhat 3·29 inches.

Thursday, 5th July.—Pressure gave way rapidly over the province during the preceding 24 hours. The fall of the barometer averaged a tenth of an inch and was greatest at Balasore ($\cdot 15''$) and at Saugor Island ($\cdot 13''$). Pressure was now below the normal by amounts which ranged from $\cdot 002''$ at Hazaribagh to $\cdot 02''$ at Chittagong and Calcutta. The depression was more clearly marked. The centre of the cyclonic circulation on the 5th was near the coast of the Sunderbuns south of Jessore, and in nearly the same position as on the 4th. Temperature had decreased and was below the average, except at Dacca. The mean temperature of the past 24 hours was from $\frac{1}{2}^{\circ}$ to $1\frac{1}{2}^{\circ}$ below the normal, except at Calcutta, where the deficiency was $5\frac{1}{4}^{\circ}$. Winds indicated cyclonic circulation about a centre near the west of South Bengal. They were south-easterly in East Bengal, easterly in North Bengal, north-easterly to northerly in North Behar, north-westerly in South Behar and Chutia Nagpur, and south-westerly at False Point and Gopalpore. Winds were stronger in Bengal and Chutia Nagpur, but were very feeble in Behar, where calms were registered at several stations. Humidity had increased considerably in Orissa, North and Central Behar and North Bengal. The sky was overcast in Orissa, South-West Bengal, East Bengal, Behar and Chutia Nagpur, and thickly clouded in North Bengal, general rain fell in Orissa, South-West Bengal (except the Burdwan and Moorsshedabad districts), East Bengal, Behar and Chutia Nagpur. The rainfall was heavy in Orissa, more especially the Pooree district. Pooree received 4·28 inches and Khordah 4·14 inches. It was light to moderate in South-West Bengal and East Bengal, and no heavy rainfalls were received. The rainfall in Behar was very general, and was well distributed, the majority of the amounts registered varying between one and two inches. The day was almost rainless in North Bengal.

Friday, 6th July.—Pressure had decreased at the great majority of stations. The fall of the barometer was small, except in Orissa and the adjacent districts of the south-west Provinces. This fall brought into greater prominence the barometric depression at the head of the Bay. The centre was moving slowly westwards parallel to the west of the Sunderbuns towards the Orissa Coast. Pressure was below the average by amounts which ranged from $\cdot 02''$ at Patna to $\cdot 15''$ at Saugor Island. Temperature was below the average, except at Burdwan and Dacca. The mean temperature of the past 24 hours was $4\frac{1}{4}^{\circ}$ below the normal in Orissa, and $2\frac{1}{4}^{\circ}$ in Behar and Chutia Nagpur. Winds were generally stronger than they were on the 5th, more especially at the head of the Bay. They continued to indicate cyclonic circulation of moderate intensity. The air was unusually dry in East Bengal. It was very damp in Chutia Nagpur, South Behar, and Orissa. The sky was overcast in Orissa, Chutia Nagpur and South Behar. The cloud amount in North Bengal was small. Rain had fallen over nearly the same areas as during the previous 24 hours. Moderately heavy rain was falling in Orissa. False Point recorded the largest amount—3·36 inches. General rain was again received in Behar and Chutia Nagpur. Bettiah received 2·5 inches and Chupra 2·3 inches. Showers fell at the great majority of the sub-divisional stations in South-West Bengal. The rainfall was unusually light in North and East Bengal, but more especially in the former.

JOHN ELIOT,
Meteorological Reporter to the Govt. of Bengal.

METEOROLOGICAL OFFICE, BENGAL,
The 10th July 1883.

MORTUARY STATISTICS OF THE DISTRICTS IN BENGAL FOR THE MONTH OF MAY 1883.

The subjoined table discloses that, during the abovementioned month, 88,391 persons died among a population of 64,553,682 living in the area under registration in Bengal, excluding the district of Lohardugga, from which no return was received up to date. These figures yield a death-rate of 16.32 per 1,000, against 17.76 per 1,000 in the preceding month, and 20.88 per 1,000 in the corresponding month of 1882. Males died at the rate of 18.36 per 1,000, and females at 14.52 per 1,000, and the proportion per cent. of male to female deaths was 124. The corresponding sexual returns of the preceding month were — male deaths 20.16 per 1,000; female deaths 15.48 per 1,000; ratio per cent. of male to female deaths 127.

The several death-causes presented the mortality shown below :—

					Ratio per mille.	
					In May.	In April.
Cholera	...	...	...	...	2.40	2.04
Small-pox	...	...	...	...	.24	.24
Fever	...	...	...	...	10.68	12.36
Bowel-complaints	...	...	...	...	.72	.72
Injury	...	...	...	...	.36	.24
Other causes	...	...	...	...	1.80	2.04

indicating that, in comparison with the preceding month, the mortality from cholera had increased to a small extent, and that from fever had abated sensibly, while the fatality from small-pox and bowel-complaints maintained the same ratios.

The incidence of small-pox, fever, and bowel-complaints was, on the whole, normal in every district, except with regard to fever in Burdwan and Nuddea, where this disease prevailed rather severely. Cholera, however, proved conspicuously fatal in the undermentioned districts. It is noticeable that in the districts of Bankura, Birbhum, Hughli, Jessore, Rajshahye, Bogra, Pubna and Maldah, which are said to be very well, if not thoroughly, protected by vaccination, no deaths occurred from small-pox :—

		Ratio per mille.			Ratio per mille.			Ratio per mille.
Julpaiguri	...	12.72	Jessore	...	3.96	Rajshahye	...	3.00
Nuddea	...	9.60	Durbhanga	...	3.96	Tipperah	...	3.00
Shahabad	...	6.84	Balasore	...	3.96	Mozufferpore	...	3.00
Maldah	...	5.52	Patna	...	3.72	Howrah	...	2.88
Mymensing	...	4.68	Rungpore	...	3.24	24-Pergunnahs	...	2.76
Murshidabad	...	4.08	Backergunge	...	3.24			

The Classes or Nationalities into which the population of the registrative area is divided, presented the following death-rates, as contrasted with the rates of the preceding month :—

					Ratio per mille.	
					In May.	In April.
Christians	...	...	...	...	19.20	15.00
Hindus	...	...	...	...	16.20	17.52
Mahomedans	...	...	...	...	10.92	18.72
Budhists	...	...	...	...	11.48	11.04
Other races	...	...	...	...	13.68	12.84

These figures represent a decrease in the mortality among Hindus and Mahomedans and an increase among the other denominations, particularly among Christians, in comparison with the death-rates of the preceding month.

Referring to mortality in relation to Age, infants under one year furnished a death-rate of 82.44 per 1,000 of the living, against 91.92 per 1,000 in the preceding month, and old men of 60 years and upwards of 33.84 per 1,000, against 39.72. The mortality under the rest of the groups of ages columned in the table, ranged from 23.40 per 1,000 among those aged 50 to 60 years to 8.16 per 1,000 among those of 10 and under 15 years, the corresponding proportions in the preceding month being 27.12 and 8.40 among those of the corresponding ages, respectively.

F. W. A. DEFABECK,

Offg Sanitary Commissioner for Bengal.

The 7th July 1883.

Statement showing the Results of the Registration of Deaths in the Districts in Bengal for the month of May 1883.

DIVISIONS.	DISTRICTS.	POPULATION.			DEATHS FROM—										RATIO PER 1,000 OF POPULATION PER ANNUM.			COMPARISON WITH PREVIOUS PERIODS.			DEATHS AMONG—		RATIO PER 1,000 OF POPULATION PER ANNUM.	Ratio of male deaths to every 100 female deaths.
		Males.	Females.	Total.	Cholera.	Small-pox.	Fever.	Bowel-complaints.	Injury.	(Other diseases).	All causes.	Cholera.	Small-pox.	Fever.	Bowel-complaints.	Injury.	Other diseases.	All causes.	Ratio of deaths per 1,000 of population in the previous month.	Ratio of deaths per 1,000 of population in the corresponding month of the previous year.	Males.	Females.		
MORTALITY ACCORDING TO—																								
Sex.																								
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OFFICE OF SANITARY COMMISSIONER FOR BENGAL, }
The 7th July 1883. }

MEMORANDA.

THE subjoined table exhibits the vital statistics of the first class municipalities in Bengal for the week ending 23rd June 1883. The figures submitted in this table indicate—

(1.) That the birth and death-rates amounted, respectively, to 21·2 and 28·4 per 1,000 of population, as opposed to the birth and death-rates of 14·7 and 27·3 per 1,000, respectively, in the preceding week ending 16th June, showing that both the birth ratio and the death ratio were higher during the week under review.

(2.) That the following municipalities returned the largest proportions of births and deaths during this week :—

Births.			Deaths.		
		Ratio per mille.			Ratio per mille.
Patna ..	..	62·3	Mozufferpore ..	..	62·0
Burdwan ..	..	25·9	Durhhanga ..	..	55·1
Bhagulpore ..	..	23·5	Gya ..	..	44·4
Comillah ..	..	23·1	Purneah ..	..	41·6
			Patna ..	..	35·4
			Comillah ..	..	34·7
			Bhagulpore ..	..	32·6
			Jessore ..	..	30·6
			Poori ..	..	30·0
			Darjiling ..	..	29·6
			Kishnaghur ..	..	28·8
			Chuprah ..	..	28·3
			Suburbs of Calcutta ..	..	27·1

(3.) That the mean rates at which the several death-causes mentioned in the table proved fatal, in comparison with the rates of the preceding week, were :—

			Ratio per 1,000 during week ending	
			23rd June.	16th June.
Cholera ..	..	..	4·5	5·6
Small-pox ..	..	..	·4	·4
Fever ..	..	..	11·7	11·7
Bowel-complaints ..	..	..	4·5	3·1
Injury ..	..	..	·4	·3
Other causes ..	..	..	6·9	6·2

indicating that there were an increase in the death-rate from bowel-complaints, a decline in that from cholera, equal mortality from small-pox and fever, and no material difference in fatality resulting from the other diseases.

(4.) That, individually considered, the greatest suffering from cholera and fever occurred in the undermentioned municipalities, the other diseases exhibiting no special local severity :—

Cholera.			Fever.		
		Ratio per mille.			Ratio per mille.
Mozufferpore ..	..	21·9	Comillah ..	..	30·8
Gya ..	..	15·0	Purneah ..	..	27·7
Durhhanga ..	..	12·6	Mozufferpore ..	..	21·9
Chuprah ..	..	6·8	Gya ..	..	21·2
Suburbs of Calcutta ..	..	6·4	Kishnaghur ..	..	20·0

(5.) That referring to mortality with reference to *Class or Nationality*, Christians died this week in the highest proportion, Hindus in the next degree, and Mahomedans at the lowest rate; and that there occurred only one death among the Budhists, the casualty being recorded in the Darjiling Municipality.

(6.) That with regard to mortality referable to *Age*, infants, as usual, perished in the largest number, (199·5 per 1,000), and next to them children of one and under five years, (60 per 1,000); that the aged also returned a high mortality, (49·3 per 1,000); but that the lowest suffering occurred among adults of 10 and under 15 years, (12·6 per 1,000).

F. W. A. DEFABECK,

The 9th June 1883.

Officiating Sanitary Commissioner for Bengal.

Statement showing the Results of the Registration of Births and Deaths in the First Class Municipalities in Bengal during the week ending 23rd June 1883.

DISTRICTS.	NAMES OF MUNICIPALITIES.	POPULATION.				BIRTHS.				MORTALITY ACCORDING TO--												Sex.			
		Males.		Females.		Total.		Ratio per 1,000 of population per annum.		Deaths from--				Ratio per 1,000 of population per annum.				Comparison with previous periods.				Males.		Females.	
		Number.		Ratio per 1,000 of population per annum.		Ratio of male births to every 100 female births.		Ratio of male deaths to every 100 female deaths.		Deaths from--				Ratio of deaths per 1,000 of population in the previous week.		Ratio of deaths per 1,000 of population in the corresponding week of the previous year.		Deaths from--				Males.		Females.	
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Cholera.	Small-pox.	Fever.	Other diseases.	Injury.	All causes.	Ratio of deaths per 1,000 of population in the previous week.	Ratio of deaths per 1,000 of population in the corresponding week of the previous year.	Deaths from--	Ratio of deaths per 1,000 of population in the previous week.	Males.	Females.	Ratio of deaths per 1,000 of population in the previous week.	Ratio of deaths per 1,000 of population in the corresponding week of the previous year.	
Burdwan	Burdwan	18,063	16,017	34,080	9	9	17	13.7	13.2	25.9	...	...	15.3	4.6	...	6.1	23.9	15.3	10	5	23.3	16.2	5	8
Midnapur	Midnapur	16,927	16,633	33,560	6	8	14	9.3	3.1	12.4	3	...	10.8	1.6	...	4.6	21.7	10.8	6	8	18.4	25.9	6	8	
Hughli	Hughli and Chinsurah	19,179	19,539	38,718	7	4	11	9.4	5.4	14.8	...	...	8.1	1.3	...	2.7	19.1	13.4	6	3	16.3	8.9	6	3
Baranagar	Baranagar	18,063	12,667	30,730	3	3	6	5.9	5.9	11.8	...	...	15.7	3.9	...	3.9	23.3	25.5	6	6	23.9	24.1	6	6
Howrah	Howrah	3,043	2,464	5,507	1	...	1	9.4	...	9.4	...	...	...	...	...	...	18.9	18.9	1	1	17.1	21.1	1	1
24 Pargannas	Suburbs of Calcutta	147,205	104,554	251,759	45	34	79	9.3	7.0	16.3	...	...	8.3	3.5	...	11.9	16.3	12.3	23	10	18.6	11.8	23	10
Kolkata	Kolkata	19,413	22,109	41,522	7	5	12	8.9	8.2	15.0	...	...	...	...	...	...	25.3	25.3	84	47	29.7	23.4	84	47
Calcutta	Calcutta	4,028	4,055	8,083	...	1	1	...	6.0	6.0	...	...	...	...	...	...	18.0	...	...	...	...	...	...	...
Sanctuary	Sanctuary	11,669	12,644	24,313	4	3	7	8.6	6.5	15.1	...	...	...	...	...	...	25.9	...	...	...	...	...	...	...
Jeetpur	Jeetpur	4,830	3,665	8,495	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bajpally	Bajpally	10,766	9,625	20,391	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Darjiling	Darjiling	4,579	2,429	7,008	1	...	1	7.4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dacca	Dacca	42,782	37,379	80,161	15	9	24	6.4	5.8	14.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chittagong	Chittagong	7,005	4,956	11,961	2	...	2	8.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tipperah	Tipperah	13,840	8,790	22,630	5	3	8	11.7	7.1	18.8	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Patna	Patna City	78,762	81,475	160,237	111	61	162	36.0	29.3	62.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gya	Gya	38,250	37,631	75,881	16	10	26	10.9	6.8	17.8	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Shahabad	Shahabad	20,980	22,505	43,485	5	4	9	6.1	4.8	10.8	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Monufersore	Monufersore	23,064	19,638	42,702	8	7	15	1.7	6.3	16.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Durbhanga	Durbhanga	30,774	31,323	62,097	14	12	26	11.0	9.5	20.5	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Baran	Baran	24,044	27,205	51,249	10	8	18	9.8	7.8	17.6	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Shahpore	Shahpore	29,640	27,313	56,953	11	15	26	9.9	10.6	23.5	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Manikpur	Manikpur	21,154	29,803	50,957	5	5	10	4.5	4.5	9.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Purneah	Purneah	8,463	6,583	15,046	1	1	2	3.5	3.5	6.9	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Poori	Poori	13,027	11,265	24,292	5	4	9	10.7	8.6	19.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	Total	706,351	623,129	1,329,480	369	254	623	12.1	9.1	21.2	116	11	220	114	9	177	226	4.3	11.7	4.3	6.9	35.1	35.1	411	315

F. W. A. DEFABECK,
Offg. Sanitary Commissioner for Bengal.

Results of the Meteorological Observations taken at the Alibore Observatory from 1st to 7th July 1883.

Month.	Date.	Maximum in sh.	Number of hours of sun- shine.	Mean pressure barometer at 32° Fahr.	TEMPERATURE.				HYGROMETRY.				WIND.		Rain.	WEATHER.
					Mean.	Maximum.	Range.	Minimum.	Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	Prevailing direction.	Miles recorded.		
1883.		☉		In. bar.	☉	☉	☉	☉	☉	Inches	☉	%			Inches.	
July	1st	156.4	4	29.601	83.0	88.6	12.4	76.2	80.0	0.096	78.8	88	SE, ESE and S by W	118	0.03	Cloudy, o, g, p, t.
"	2nd	155.5	10	.508	84.8	90.5	11.5	79.0	80.0	1.006	79.4	84	S, SE and SSW ...	76	Nil.	Chiefly cloudy.
"	3rd	148.5	7	.618	83.5	89.0	9.8	79.2	79.2	0.942	77.4	82	SSW, WNW and va- riable.	87	0.12	Cloudy, o, g, d, p.
"	4th	128.5	Nil	.557	80.7	84.8	7.0	77.2	78.0	.952	77.7	91	NW and W by N ...	80	2.16	Cloudy, o, g, p, d, t.
"	5th	158.4	5	.474	81.3	88.5	9.8	79.2	78.5	.936	77.2	87	NE by E and N by E	163	0.55	Cloudy, o, g, d, t, p
"	6th	147.0	6	.443	83.2	88.4	9.7	78.7	79.0	.965	78.1	85	E and ESE ...	220	0.23	Cloudy, o, g, p, d.
"	7th	144.0	Nil	.481	82.9	87.4	8.2	79.2	79.1	.941	77.4	83	SE, E and SSE ...	284	0.16	Cloudy o, g, d, p. lt.

The mean pressure of the seven days

The average pressure of the corresponding period for 24 years, S. G. Office

The total number of hours of sunshine of the seven days

The mean temperature of the seven days

The average temperature of the corresponding period for 24 years, S. G. Office

The extreme variation of temperature during the seven days

The maximum temperature during the seven days

The highest velocity of the wind in one hour during the seven days

The highest pressure of the wind on one square foot during the seven days

The mean relative humidity during the seven days

The average relative humidity of the corresponding period for 24 years, S. G. Office

The total fall of rain from 1st to 7th July 1883

The average fall of the corresponding period for 24 years, S. G. Office

The total fall from 1st January to 7th July 1883

The average fall of the corresponding period for 24 years, S. G. Office

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, and from observations made at 6h, 10h, 16h, and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 86 formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The direction of the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

o overcast, g gloomy, p passing temporary showers, t thunder, d drizzling rain, lt lightning reflection.

JOHN ELIOT,

METEOROLOGICAL OFFICE, INDIA,
The 9th July 1883.

For Meteorological Reporter to the Government of India.

Results of the Thermometrical Observations taken at the Meteorological Office,
Chowringhee, from 1st to 7th July 1883.

Month.	Date.	TEMPERATURE.				HYGROMETRY.				Rain.
		Mean.	Maximum.	Range.	Minimum.	Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	
1883.		°	°	°	°	°	Inches.	°	%	Inches.
July	1st	82.7	89.8	12.0	76.8	79.4	.981	78.0	86	Nil
"	2nd	84.6	91.4	11.6	79.8	81.3	1.026	80.0	86	"
"	3rd	84.3	90.0	9.3	80.7	80.6	.995	79.1	84	"
"	4th	79.0	85.8	8.6	77.2	78.4	.966	78.2	88	3.12
"	5th	80.8	88.1	8.8	79.3	79.3	.985	78.8	94	0.09
"	6th	82.4	87.8	9.0	78.8	80.0	.999	79.0	89	0.41
"	7th	82.3	88.6	9.4	79.2	79.8	.985	78.8	89	0.01

The mean temperature of the seven days ... 82.3
 The extreme variation of temperature during the seven days ... 14.6
 The maximum temperature during the seven days ... 91.4

The mean relative humidity during the seven days ... 89

The total fall of rain from 1st to 7th July 1883 ... 4.28

The mean temperature and humidity are obtained by applying to the mean of the 10h, 16h, and minimum readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA,
The 9th July 1883.

JOHN ELIOT,
For Meteorological Reporter to the Govt. of India.

Abstract of the results of the Thermometric Observations taken at the Meteorological
Office, Chowringhee, in the month of June 1883.

		☉	Date.
The mean temperature during the month	...	83.4	
The highest temperature during the month	...	99.0	1st and 7th
The lowest temperature during the month	...	75.8	5th and 18th
The range of temperature during the month	...	23.2	
The mean daily range of temperature during the month	...	12.3	
The greatest range of temperature in one day during the month	...	20.6	5th
		%	
The mean humidity during the month	...	85	
		Inches.	
The mean vapour tension during the month	...	.972	
The total rainfall of the month	...	11.96	
The greatest fall in 24 hours	...	2.44	14th
		Days.	
The number of rainy days in the month	...	17	

JOHN ELIOT,
For Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA,
The 9th July 1883.

**Abstract of the results of Meteorological Observations taken at the Alipore
Observatory in the month of June 1883.**

			Inches.	Date.	hour
The mean pressure of the month	...	...	29.519		
The average pressure of 24 years	...	...	29.549		
The highest pressure during the month	...	...	29.773	1st	10h.
The lowest pressure during the month	...	...	29.214	29th	16h.
The range of pressure during the month	...	...	0.559		
			Hours.		
The total number of hours of sunshine during the month	...	...	136		
			°		
The mean temperature during the month	...	...	83.9		
The average temperature of 24 years	...	...	85.0		
The highest temperature during the month	...	...	98.7	1st	
The lowest temperature during the month	...	...	73.2	5th	
The range of temperature during the month	...	...	25.5		
The mean daily range of temperature during the month	...	...	13.1		
The greatest range of temperature in one day during the month	...	...	21.3	5th	
			Per cent.		
The mean humidity during the month	...	...	83		
The average humidity of 24 years	...	...	81		
			Inches.		
The mean vapour tension during the month	...	...	0.960		
The average vapour tension of 9 years	...	...	0.998		
The mean cloud proportion of the month	...	...	7.94		
The total rainfall of the month	...	...	10.20		
The total rainfall of the month indicated by a Beckley's self-registering rain-gauge (mouth of the gauge 50.5 feet high)	...	...	9.55		
The average fall of 48 years	...	...	12.08		
The greatest fall in 24 hours	...	...	2.40	1st	
			Days.		
The number of rainy days in the month	...	...	20		
The average number of rainy days of 24 years	...	...	19		
			°		
The mean maximum equilibrium temperature of solar radiation of the month	...	...	146.4		
The mean difference of sun and air temperatures	...	...	55.6		
The greatest sun temperature	...	...	161.9	8th	
The greatest excess of sun over air temperature	...	...	68.6	23rd	
The mean temperature of nocturnal radiation thermometer on woollen cloth	...	...	75.0		
The mean depression of nocturnal radiation thermometer below the minimum of air	...	...	2.8		
The greatest depression of nocturnal radiation thermometer below the minimum of air	...	...	4.8	1st	
			Miles.		
The mean movement of the wind per day	...	...	153.8		
The greatest movement of the wind in one day	...	...	472.0	29th	
The greatest movement of the wind in one hour	...	...	28.0	29th, 10 to 11 A.M.	
The number of hours under each of the 8 points—					

N. 2, NE. 18, E. 90, SE. 108, S. 238, SW. 213, W. 38, NW. 9, Calm 4.

The results of observations at the Alipore Observatory are not rigorously comparable with the registers of past years (at the Park-street Observatory). The barometer is about 3 feet higher at Alipore, and, other things being equal, reads therefore .003 lower. The diurnal range of temperature is also greater at Alipore, and the mean temperature apparently about 0.5° greater; and finally, the thermometer, which has furnished the record of temperature at the Surveyor-General's Office during the last 20 years and upwards, is found to read 0.6° higher than the Kew standard thermometer, which is the standard of reference at the present Observatory.

N. B.—In the monthly abstract for April 1883 read 0.840, instead of 0.835, as the mean vapour tension during the month; and in that for May 1883 read 76 per cent., instead of 75 per cent., as the mean humidity, and 0.944 instead of 0.935 as the mean vapour tension during the month.

METEOROLOGICAL OFFICE, INDIA,
The 9th July 1883.

JOHN ELIOT,
For Meteorological Reporter to the Govt. of India.

PUBLIC WORKS DEPARTMENT, BENGAL.

IRRIGATION BRANCH.

IRRIGATION OPERATIONS FOR THE OFFICIAL YEAR 1883-84.

Areas leased for Irrigation up to the end of May 1883.

[illegible]

The 10th July 1883.

C. W. ODLING,
Under-Secy to the Govt. of Bengal, P. W. Dept.

Weekly Return of Traffic Receipts on Indian Railways.

EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 30th June 1883 on 1,500 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TOTAL TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	223,217	Rs. A. P. 2,22,322 1 0	Wds. s. 28,09,729 0	Rs. A. P. 9,12,022 0 9	Rs. A. P. 20,524 10 8	Rs. A. P. 11,55,448 12 2	64,053	135,723	240,776
Or per mile of railway ...	147 5 4	147 5 4	.....	604 12 7	13 9 7	765 11 6	.....	.....	.....
For previous 24 weeks of half-year ...	5,432,949	61,12,511 9 7	6,65,91,172 30	1,85,87,960 15 1	5,30,598 3 7	2,50,31,076 12 3	1,053,233	3,008,214	5,161,508
Total for 24 weeks ...	5,050,160	63,31,833 10 7	7,14,50,001 30	1,93,00,568 16 10	5,51,122 14 0	2,61,86,545 8 5	1,717,340	3,003,037	5,611,233
COMPARISON.									
Total for corresponding week of previous year ...	171,236	1,78,402 1 6	18,47,120 10	4,90,360 5 3	42,262 0 7	7,11,024 7 4	42,659	91,169	133,828
Per mile of railway corresponding week of previous year ...	.....	118 6 5	.....	325 7 1	28 0 9	471 14 3	.....	.....	.....
Total for corresponding date of previous year ...	5,148,480	71,21,606 10 3	6,14,74,392 30	1,74,63,184 1 5	6,21,486 7 0	3,52,00,227 2 8	1,390,662	3,078,095	4,468,777

BENGAL PROVINCIAL RAILWAYS.

Weekly Statement of Traffic Receipts.

Latest return received.	Name of Railway.	Length open.	RECEIPTS FOR WEEK ENDING		TOTAL RECEIPTS FROM 1ST JANUARY		Total increase in 1883.	Total decrease in 1883.	Percentage of increase or decrease.
			27th May 1882.	26th May 1883.	To 27th May 1882.	To 26th May 1883.			
1883.		Miles.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs.
2nd June ...	Northern Bengal	230	59,994 0 0	45,316 0 0	7,09,202 0 0	9,69,775 0 0	1,70,573 0 0	.....	+21
Ditto ...	Tirhoot	154	12,447 0 0	20,753 0 0	2,44,878 0 0	3,40,345 0 0	51,998 0 0	.....	+16
Ditto ...	Calcutta and South-Eastern	43	7,050 0 0	8,433 0 0	77,048 0 0	1,22,577 0 0	45,029 0 0	.....	+53
Ditto ...	Nathati	27	1,502 0 0	1,584 0 0	29,829 0 0	34,778 0 0	4,949 0 0	.....	+16
Total ...		450	61,863 0 0	75,086 0 0	11,93,457 0 0	14,07,570 0 0	2,71,919 0 0	.....	+23

BENGAL PROVINCIAL RAILWAYS.

Weekly Statement of Traffic Receipts.

Latest return received.	Name of Railway.	Length open.	RECEIPTS FOR WEEK ENDING		TOTAL RECEIPTS FROM 1ST JANUARY		Total increase in 1883.	Total decrease in 1883.	Percentage of increase or decrease.
			3rd June 1882.	2nd June 1883.	To 3rd June 1882.	To 2nd June 1883.			
1883.		Miles.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs.	Rs.
2nd June ...	Northern Bengal	230	33,529 0 0	35,715 0 0	8,82,731 0 0	10,05,520 0 0	1,72,789 0 0	.....	+20
do. ...	Tirhoot	154	12,238 0 0	19,678 0 0	3,01,110 0 0	3,59,034 0 0	58,893 0 0	.....	+19
do. ...	Calcutta and South-Eastern	43	2,584 0 0	5,722 0 0	80,132 0 0	1,25,303 0 0	45,171 0 0	.....	+50
do. ...	Nathati	27	1,730 0 0	1,082 0 0	31,550 0 0	30,440 0 0	4,881 0 0	.....	+15
Total ...		450	50,081 0 0	62,913 0 0	12,45,538 0 0	15,20,180 0 0	2,84,651 0 0	.....	+23

DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

Weekly Statement of Traffic Receipts.

The latest return received.	Length open.	RECEIPTS FOR WEEK ENDING		TOTAL RECEIPTS FROM 1st JANUARY		Total increase in 1883.	Total decrease in 1883.	Percentage of increase or decrease.
		3rd June 1882.	2nd June 1883.	To 3rd June 1882.	To 2nd June 1883.			
4th July 1883	50	Rs. A. P. 6,800 5 9	Rs. A. P. 10,143 13 8	Rs. A. P. 1,46,070 4 9	Rs. A. P. 1,53,712 2 1	Rs. A. P. 7,942 0 4	Rs. A. P.	+5

Calcutta, the 4th July 1883.

GILLANDERS, ARBUTHNOT & Co., Agents.



SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, JULY 18, 1883.

OFFICIAL PAPERS.

Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.

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ANNUAL REPORT OF THE GOVERNMENT CINCHONA PLANTATION IN BENGAL AND THE ANNUAL REPORT OF THE QUINOLOGIST FOR THE YEAR 1882-83.

FINANCIAL DEPARTMENT—AGRICULTURE

Calcutta, the 10th July 1883.

RESOLUTION.

READ—

The Annual Report of the Government Cinchona Plantation in Bengal for the year 1882-83, and the Annual Report of the Quinologist for the same year.

The result of the planting operations of the year shows a decrease of about 50,000 cinchona trees on the returns of 1881-82. This is due to the uprooting of a large number of the *Calisaya* and hybrid varieties which were found to possess bark of poor quality. Some 160,000 red bark trees were also uprooted in the ordinary rotation, and were replaced by the yellow bark and hybrid varieties. Nearly all the land within the existing cinchona reserve suitable for the cultivation has now been planted out, and the Superintendent accordingly applied, in October last, for permission to plant out with *Ledgeriana* and the hybrid variety a tract of land in the trans-Teesta portion of Darjeeling which had been reserved for Government cinchona cultivation. Both these species have been proved by repeated analyses to be very rich in quinine, while most of the yellow bark or quinine-yielding trees on the existing plantations at Mungpoo are quite young, and the whole stock is not sufficient to furnish, even when mature, enough bark to employ the factory profitably for more than a few weeks in the year. There is in fact no plantation of these trees actually

in existence, while the nurseries have a magnificent stock of nearly half a million plants of the best sorts of yellow bark trees which would be lost unless the seedlings were speedily planted out. The proposal for forming the new plantation was readily approved by Government, and measures have since been taken for planting out the reserve with a number of the best kinds of *Ledgeriana* and hybrid cinchonas.

2. In the Resolution recorded upon the proceedings of last year, it was remarked that there were several distinct forms of the hybrid variety, and analyses were given of the samples of bark of four of these forms. During the year under review the Superintendent had analyses made of four more of these forms, and the results obtained from all the eight hybrids are compared in the following table:—

	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 7.	No. 8.
Crystallised sulphate of quinine	2.87	1.48	1.88	0.97	2.72	2.04	6.12	3.99
" " of cinchonidine	2.04	2.85	2.95	1.04	2.84	2.20	2.60	2.33
" " of quinidine	traces.	traces.	traces.	traces.	traces.	traces.	traces.	traces.
Cinchonine (alkaloid)	0.72	0.57	0.82	0.80	0.83	0.08	0.85	0.57

Dr. King points out that hybrid No. 4 is very poor in quinine, and it was the trees of this sort that were uprooted during the year. No. 7 appears to be exceptionally rich in quinine, and the plantations of this variety might with advantage be extended.

The total number of cinchona trees of all sorts at the close of the year was 4,711,168, namely red (*Cinchona Succirubra*) 3,713,200, yellow (*Calisaya Ledgeriana*) 662,998, hybrid unnamed variety 304,378, and other kinds 30,592.

3. It is satisfactory to observe that the crop of the year is the largest that has yet been harvested on the plantations. It amounted to 396,980 pounds of dry bark, of which 372,610 pounds were of *Succirubra*, 22,120 pounds of *Calisaya* and *Ledgeriana*, and 2,250 pounds of hybrid bark. By far the largest portion of the produce was made over to the factory for conversion into cinchona febrifuge, while about 41,800 pounds of yellow and red barks were sent at the request of the Secretary of State to London to be there converted into various forms of febrifuge and returned to this country for trial by the Medical Department.

4. The expenditure on the plantations amounted to Rs. 80,739-6-2 against the budget allotment of Rs. 82,225. Of this expenditure Rs. 17,548-8-9 was incurred on the newly opened trans-Teesta plantation, and on the young plantation at Sirtong. This sum is chargeable to capital account. The balance, amounting to Rs. 63,191 2-5, which was spent on the old plantation, and includes charges on account of packing and carriage of bark sent to England, is chargeable as working expenses.

5. It is disappointing to notice the continued failure of *Carthagina* bark, notwithstanding that the utmost care has been taken of the plants and every endeavour made to grow them at various elevations and with various exposures. Only three plants were alive at the close of the year. An attempt has been made by the Superintendent to introduce the *Remija* plant, which is a genus botanically allied to cinchona. It is said to be less particular than cinchona as to soil and climate, and produces a quinine-yielding bark under the name of *Cuprea*. This bark forms a very large proportion of the quantity of quinine bark imported into Europe. Although the first attempt to grow the plant in the Mungpoo plantations has not been quite successful, Dr. King entertains hopes of successfully acclimatizing it, when he is able to procure a more adequate supply of seed. The Lieutenant-Governor will await the result of the experiment with much interest. The surplus seed of the *Calisaya Ledgeriana* was as usual distributed during the year gratuitously amongst applicants.

6. Dr. King has eventually succeeded in obtaining an analysis of the bark renewed on *Succirubra* trees that had their original bark removed by the shaving process introduced by Mr. Moens, the distinguished Director of Cinchona Cultivation to the Dutch Government. It appears that this process consists in shaving off the greater part of the bark of a living tree to the height of from eight to ten feet from the ground, care being taken to leave everywhere a sufficiently thick layer of bark to cover the wood. This method has had a

fair trial on the Sikkim plantations, and the result has, beyond doubt, been favourable, as the bark renews perfectly. What, however, remained to be seen was whether the renewed bark was as rich in medicinal alkaloids as the original. It was with the object of determining this question that the analysis above referred to was undertaken during the year. The results are thus described by Dr. King: "The bark renewed rather slowly, but the analysis shows that it is very rich both in quinine and cinchonidine; and there can be no doubt that in countries where red bark trees are perfectly at home, and where their continuance in good health and vigour for a long series of years can be absolutely counted on, this shaving process must be a very excellent one."

7. An interesting feature in the operations of the year is the low cost at which the febrifuge was turned out. The price of the febrifuge necessarily fluctuates from year to year, but in no former year has it been so low as Rs. 8-8 a pound. This satisfactory result is attributed chiefly to the larger percentage of the alkaloids (2.78) extracted from the bark used in manufacture. The issues, however, fell below those of 1881-82, though they were a little in advance of those for 1880-81. The following table compares the distribution in the past three years:—

	1880-81.	1881-82.	1882-83.
	lb. oz.	lb. oz.	lb. oz.
To Medical Depot, Calcutta ...	3,000 0	3,386 0	2,000 0
Ditto, Bombay ...	2,000 0	1,000 0	1,000 0
Ditto, Madras ...	500 0	800 0	350 0
To Colonial Government, Mauritius	.....	.....	150 0
To Surgeon-General for District Medical Officers of Bengal	.....	995 4	803 12
To Inspector-General of Jails for jails and lock-ups, Bengal	.....	14 12	26 12
Sold to the public ...	3,150 11	4,080 0	4,560 12
Given as samples ...	3 2	2 9	10 0
Total	8,653 13	10,878 9	8,901 4

The issues to the public were 120 pounds below those of 1881-82, and not in excess of that year as stated in the Superintendent's report. The stock of febrifuge in hand on 31st March 1883 amounted to 2,962½ pounds, which, though greater than that with which the year opened, is by no means too large a reserve to meet emergencies.

8. The revenue derived from the sale of the febrifuge, seed, plants, and bark amounted to Rs. 1,52,807-1-0—

	Rs	A.	P.
By sale of febrifuge, seed, plants, and bark to the public	80,577	9	0
By credits from the Medical Depot of Calcutta	33,766	0	0
Ditto ditto ditto of Bombay	16,500	0	0
Ditto ditto ditto of Madras	5,775	0	0
Ditto from Colonial Government of Mauritius	2,475	0	0
Ditto from the Surgeon-General, Bengal	13,271	8	0
Ditto from the Inspector-General, Jails	442	0	0
Total	1,52,807	1	0

The operations of the year resulted in a profit of Rs. 66,284-9-5, which is equal to a dividend of 6½ per cent on the capital outlay. This is exclusive of the cost of a considerable quantity of the bark sent to the Secretary of State which has not been taken into account. It must, moreover, be borne in mind that these profits do not represent the whole of the gain of the year. The cost of an equal quantity of quinine at Rs. 96 per pound would have been Rs. 4,01,328. The cost of the febrifuge used was Rs. 68,988-8. There was thus a saving of Rs. 3,32,340. The total saving effected since the opening of the factory by the substitution of the febrifuge for sulphate of quinine amounts to Rs. 23½ lakhs, which is more than twice the amount of the cost of the plantations.

9. Considerable attention was given during the year to the improvement of the process of manufacture. The present system is admittedly wasteful, in that it fails to convert into febrifuge the whole of the alkaloids which the bark contains, while there is no doubt that, by the adoption of a different and more costly process of manufacture, a still larger percentage of the

medicinal alkaloids could be extracted. It is not, however, equally certain whether the febrifuge so obtained could be turned out at a less cost per pound. The whole subject of the course to be adopted in the disposal of the raw produce of the plantations is still under the consideration of Government.

10. The thanks of the Lieutenant-Governor are again due to Dr. King, whose management of his department leaves nothing to be desired. Dr. King has reported very favourably of the services of Mr. Gammie, and the Lieutenant-Governor entirely concurs in the praise accorded to him. The other assistants of the Department are also well spoken of.

By order of the Lieutenant-Governor of Bengal,

COLMAN MACAULAY,

Secretary to the Govt. of Bengal.

RESOLUTION ON THE REPORT ON THE ADMINISTRATION OF THE METEOROLOGICAL DEPARTMENT DURING THE YEAR 1882-83.

REVENUE DEPARTMENT—MISCELLANEOUS.

Calcutta, the 17th July 1883.

RESOLUTION.

READ—

The Report of the Meteorological Reporter to the Government of Bengal, on the Administration of the Meteorological Department during the year 1882-83.

THE Lieutenant-Governor desires to thank Mr. Eliot for his interesting report. Mr. Eliot has not only adequately described the changes recently introduced for extending the observations of the department and for improving the weather report, but he has also furnished a full account of the work done during the year. As Mr. Eliot's report is, therefore, of more than usual interest, the Lieutenant-Governor thinks it desirable that it should be published; and this Resolution will be mainly confined to a brief statement of the previous history of the department, with the view of completing the information contained in the report.

2. Up to the year 1865 the only regular observatory in Bengal was that attached to the Surveyor-General's Office in Calcutta, at which observations had been recorded hourly since 1853. An attempt was made in 1847 to obtain statistics of temperature and rainfall at all sudder stations, and returns were furnished for several years, but they were found to contain such grave discrepancies as to be useless for all practical purposes. The destruction of life and property caused by the great Calcutta cyclone of the 5th October 1864 brought prominently to notice the necessity of bestowing greater attention on the study of the meteorology of the country, and in April 1865 the Lieutenant-Governor, Sir Cecil Beadon, appointed a Committee, with Mr. H. F. Blanford as Honorary Secretary, to establish a system of telegraphic reports, such as would serve to apprise the shipping of Calcutta of the approach of cyclonic disturbances.

The Committee accordingly established six observing stations,* and started the publication of daily weather reports of the observations telegraphed from those stations, together with the observations taken at Calcutta, and others received from the Madras observatory and a private observer in Ceylon.

* viz. Saugor Island.
Cutlack.
Chittagong.
Akyah.
Dacca and Darjeeling.

3. The preliminary arrangements of the system inaugurated by the Committee having been completed, it became necessary to entrust the further control of the work to a special officer, and in April 1867, Mr. Blanford was appointed Meteorological Reporter to the Government of Bengal, and the executive duties of the Committee were transferred to him. The system continued to expand, additional stations were established, and further steps were taken for securing an efficient system of storm-signals and warnings for the town and shipping of Calcutta.

4. In 1871, in order to familiarise the local officers with the use of statistics, and with the observation of facts which every district officer ought carefully to watch in a country where such a surprise as the famine of 1866 was possible, Sir George Campbell prescribed the punctual submission of a weekly return of the state of the weather and prospects of the crops. The variations of rainfall and weather, and other statistics relating to the agriculture of the Province were regularly published in the *Calcutta Gazette*, and it was due to these returns that the want of rain in 1873 attracted timely notice, and that early measures were taken to meet the famine which followed it in 1874.

5. The work of the Meteorological Department received a further expansion in 1880 by the introduction, under the authority of the Government of India, of a scheme of Marine Meteorology. In furtherance of the work connected with this branch of the Department, data regarding the weather on Indian seas are now collected through the medium of Hooghly pilots, and, where available, the logs of vessels coming into the Port of Calcutta. An attempt to collect such data through masters of vessels was made in 1868, but the attempt did not succeed, and it was finally given up in 1875. The present system, however, gives promise of better results, as many of the returns received from the captains of incoming vessels are found to contain meteorological data of great value.

6. The further measures which have now been taken for extending and improving the usefulness of the meteorological reports are detailed in Mr. Eliot's report. Up to the close of 1882-83 meteorological observations were taken at 21 observatories, and rainfall returns were received from 161 stations, but under the new system there will be 21 additional observatories, and 156 additional rainfall recording stations. All portions of the province will thus be brought under daily observation; and it is to be hoped that the facts which will by this means come upon record will enable a sufficient foundation to be laid for a trustworthy system of economic meteorology for Bengal. An improvement has also been made in the form and size of the *daily weather reports*, and these are now available at moderate charges for the information of the public.

ORDER.—Ordered that this Resolution, with a copy of the Meteorological Report for 1882-83, be published in the *Calcutta Gazette*.

By order of the Lieutenant-Governor of Bengal,

A. P. MacDONNELL,

Offg. Secretary to the Government of Bengal.

ADMINISTRATION REPORT OF THE METEOROLOGICAL REPORTER
TO THE GOVERNMENT OF BENGAL FOR THE YEAR 1882-83.

DURING the official year 1882-83, meteorological observations were taken regularly at one first class observatory, seven second class observatories, and twelve third class observatories in the provinces of Bengal and Assam. An additional third class observatory was established at Tura in the Garo Hills in the month of March 1883.

During the year a series of changes was sanctioned by the Bengal and India Governments for extending the work of observation of the department, and for improving the publication of the meteorological data collected by the department for the information of the Government of Bengal, district officers, and the general public. As these changes very considerably extend and modify the department under my charge, it appears desirable to place on record a full statement of the reasons for the changes, and an account of the circumstances under which they were made.

The origin of the proposals was a demi-official letter which I received from the Secretary to the Government of Bengal, Revenue Department, Mr. A. P. MacDonnell, on the 11th of August. In this he pointed out that the meteorological information published in the Gazette was not sufficient for the wants of the Bengal Secretariat, and asked if I could not arrange to publish weekly in the Gazette the meteorological observations taken over the province during the preceding week, together with a statement in which the more important meteorological features of the week should be clearly and prominently brought to the notice of Government and district officials. The attention of the Government of Bengal was particularly directed to the meteorology of Bengal and the working of the Bengal Meteorological Department at this time by the unusual lightness of the rains in Northern and North-Eastern Bengal. It was so serious at one time as to suggest the probability of a partial failure of the crops. The daily reports issued by the Meteorological Reporter to the Government of India gave very little information respecting this part of Bengal, and threw no light on the meteorological conditions of the district. The returns sent in to me by post and tabulated in the ordinary routine of the work of a small office did not show until later that, although the rainfall was deficient and abnormal in character, this was due mainly to lightness of the rain showers and not to any diminution in the number of rainy days or in the amount of cloud. I replied to Mr. Secretary MacDonnell's letter on the 13th of August, admitting that the Bengal Meteorological Department was, in comparison with similar Meteorological Departments in European countries and the United States, very much behind hand in utilizing and publishing for the public benefit the meteorological data it collected. I pointed out that this part of the work of the department, "Economic Meteorology" as it might be termed, appeared to me to be of primary importance in India, and added that I should be willing, if the means were placed at my disposal, to use my utmost efforts to propose and establish an effective provincial meteorological system which should collect, tabulate, and publish, at frequent intervals, the results of the observations taken throughout the province at a sufficient number of stations to represent its more important meteorological conditions and changes adequately, together with a comparison of the current atmospheric conditions in Bengal with the normal meteorological conditions of the province, and to trace out, so far as I could, the connection between these variations in the elements of meteorological observation with the variations in the distribution of rainfall throughout the year. I also indicated roughly the more important changes it would be necessary to make in order to establish and develop a provincial system of meteorological observation which should keep the Government fully informed of the present meteorological conditions of the province and their variations from the normal conditions. Mr. Secretary MacDonnell replied demi-officially to this on the 29th of October, stating that I had correctly estimated and described what was required to improve the meteorological information supplied by my department, and that the Lieutenant-Governor approved the objects aimed at, and the general outline of the proposals I had suggested to secure these objects, and requested me to come up to Government

officially on the matter, and submit my proposals with the necessary fulness, and to state the modifications it would be necessary to introduce into the existing establishment and practice of the department.

I spent a part of the College cold-weather vacation in collecting information, and finally submitted my proposals to the Government of Bengal on the 29th of December. The following extracts (with some slight modifications and change of verbal expression) will indicate the objects aimed at, and the character of the proposals:—

"The Meteorological Departments in India ought to carry out two objects differing considerably in character and value. The first is that of contributing a share towards the advancement of meteorology as a science, i.e. of the determination of the exact relations which subsist between the various atmospheric conditions and changes and the effective causes or actions. India is the only tropical country which possesses a fairly complete and satisfactory meteorological system for this purpose. It also presents, from its geographical position, many unique meteorological conditions and features of great scientific interest and value. It is thus qualified to play a very important part in the progress of scientific meteorology. This it can do by collecting and publishing accurate observations, taken under suitable conditions, and also by discussing them in a scientific manner and distributing the results of its investigations to meteorologists over the world. This appears to me to be the work to which the Meteorological Reporter to the Government of India and his scientific assistant (lately appointed) are mainly devoting themselves, and to which they make the local reporters subservient. It is evident that it is immaterial whether the relations they are in search of are determined from observations of a day or a century ago, provided they are known to be accurate and reliable, and the investigations are exact. Rapidity in the collection and discussion of the observations is obviously not desirable, and might be dangerous as leading to hasty and perhaps erroneous conclusions.

"The second object of the Meteorological Department is less important from a scientific aspect, but is of supreme importance economically in a country like India, which is dependent for its prosperity almost entirely upon its agricultural resources and productions, and where the fluctuations of rainfall are so great as to subject a large part of the country to the occasional occurrence of prolonged drought and intense famine. This second branch of meteorological work in India is to publish, for the information of the Government, and all others directly interested in it, frequent statements of the present meteorological conditions of the country and its variation from the average conditions, and, so far as is possible, anticipations of any impending important atmospheric disturbance. This it can only do by the rapid and continuous collection, tabulation, and discussion of the observations taken at the various reporting stations. This continuous consideration of the weather, as it is at the present moment, will alone furnish the experience, methods and instincts necessary to consider it as the invariable antecedent of the weather to come. This will gradually lead up in the case of Indian meteorological enquiry to the true test and the ultimate aim of every science—prevision more or less perfect. An early step in such a direction, for example, would be to prewise the general character of the distribution of the monsoon rains from the atmospheric conditions of the preceding hot-weather months. This which may be termed "economic meteorology" in opposition to the first or "scientific meteorology," is of as great importance to the Local Governments as to the Imperial Government. It is included in the programme of the Meteorological Reporter to the Government of India. The publication of his daily weather report supplies sufficient information to satisfy the present requirements of the Government of India. But this report is published at too frequent intervals for the guidance of officials in Bengal, the remarks are very brief and general, and are especially defective in the most important point, viz. the distribution of rainfall in each province, more especially during the south-west monsoon, and are practically of no great value for the information and guidance of the Government of Bengal. This branch of meteorological work in India was the subject of special recommendation by the Famine Commissioners, as is shewn by the following quotation (*vide* Report, Part I, paragraph 40):—

"Within the last few years a very satisfactory system of meteorological observations has been established all over British India, and in our opinion it is of primary importance that it shall be maintained in complete efficiency, and shall so far be strengthened and improved, as to ensure the early and punctual supply of information to the Executive Governments, and to the officials in all departments concerned with the agriculture of the country, or the preparations required to meet famines, as to the actual progress of the periodical seasons of rain in all parts of the provinces for which those Governments or officers are respectively responsible. So far as it may become possible, with the advance of knowledge, to form a forecast of the future, such aids should be made use of, though with due caution."

"This early and punctual supply of meteorological information is moreover, as General Strachey pointed out to me a few years ago, that part of meteorological work which the Local Governments ought not merely to encourage, but to promote, and which is more especially the province of the Local Reporters as opposed to the Imperial Reporter."

"The work proposed to me to carry out is identical in its general character with that stated by the Famine Commissioners to be one of the most important duties of the Meteorological Department, viz. the early and punctual supply of accurate meteorological information to the Executive Government and district and other officials. The extensions that I desire to submit to the Government of Bengal have this solely for their object. They provide for the daily submission of observations taken at 10 A. M. at 38 stations distributed throughout the province, and of rainfall returns from about 156 additional stations, and for their rapid continuous reduction, tabulation, and discussion in the Bengal Meteorological Office. The complete rainfall returns of the province I propose shall in future be considered at the same time and in conjunction with the meteorological observations. This will be effected by linking to each meteorological observatory the adjacent rainfall recording stations. By this mode of treatment I hope to determine all the more important meteorological features of each district, which will thus be represented by a group of one or two observing stations and several rainfall stations. In this way, more especially, the amount, distribution, and variation from the mean, of the rainfall throughout the province, can be approximately gauged week by week, month by month, or season by season, and be recorded in the speediest and most exact manner for the information of Government."

"The present meteorological system established in Bengal appears, with the above objects in view, to be defective in the following respects:—

"1st.—The stations are too few in number to represent adequately the province of Bengal. They are in all fourteen stations for the whole of Bengal, Behar, Chutia Nagpore, and Orissa, including an area of 205,000 square miles. Of these stations two—False Point and Saugor Island on the seaboard—are maintained solely in connection with the Calcutta Storm Signal Service. The province of Bengal, occupying an area nearly twice as large as the British Islands, is represented meteorologically, for agricultural and economic purposes, by only twelve stations. The weekly agricultural and weather report of the British Islands, published by the English Meteorological Office, is based on the meteorological returns of 66 stations, and I am informed that even that number of stations is considered insufficient. In making this comparison, I do not wish to assert that observing stations should be as thickly spread in India, as in England, to give the same extent of information of weather conditions and changes. The weather in Bengal is undoubtedly much more uniform than in the British Islands. Irregularities of atmospheric conditions are also usually of a much simpler and more persistent character. Even taking these facts into consideration, it appears to me that Bengal is by no means sufficiently represented by its present twelve meteorological stations."

"2nd.—The present observatories are by no means equally distributed throughout the province. Large and important districts, from an agricultural point of view, are almost, if not entirely, unrepresented. The most glaring example of this is Northern Bengal. The whole of the Bengal plains to the east of Purneah and to the north of Berhampore, Jessore, and Dacca, comprising, I believe, the entire jute-producing districts of India, does not

possess a single observatory. The more eastern districts are to a certain extent represented by Dhubri and Silchar. It appears, however, not too much to assert that Northern Bengal as a whole is unrepresented in our meteorological system at the present time. Similarly, the whole of the southern districts of Chutia Nagpore, and the Midnapore and Balasore districts, are outside the range of observation of the existing stations.

"3rd.—The present system of twelve stations, which, even if it were in perfect order, would be insufficient to represent Bengal, is really, in consequence of a third defect, less efficient than it appears. Native observers, in consequence of their imperfect scientific instincts, and of the very slight scientific training given in Indian schools and colleges, are frequently inaccurate. And even if they have been carefully trained, many of them are liable to lapse into careless and erroneous methods. Frequent inspection at unexpected times, and more especially when the returns themselves indicate errors, more or less continuous, is an absolute necessity. Yet this, under the present system, is an impossibility in Bengal. I am bound down to Calcutta without a day's intermission for practically ten months of the year by the combination of my college duties, my storm signal and daily weather report work, and by the charge of the India Weather Office during the absence of the Reporter to the Government of India in Simla. I can only leave Calcutta on inspection duty for a short period during the cold season. Defects, observational or instrumental, may hence be prolonged for months, and even years, without detection. This defect is a very serious one. Each succeeding year's tour of inspection impresses it upon me more strongly.

"4th.—The present mode of collecting, reducing, and discussing the meteorological observations is dilatory and unsatisfactory. If the sole object of the department were the collection and publication of accurate observations for the information of European Meteorologists, it would be unobjectionable. As pointed out by the Famine Commissioners, early and exact meteorological information is at all times valuable to the Government and district officers of Bengal, and occasionally it is a pressing necessity; and yet it is hardly too much to state that the Bengal Reporter can furnish to the Provincial Government fuller and later information of the meteorology of any portion of the British Islands than he can of the greater part of Bengal. It is not necessary to state fully the causes of this. It is sufficient to state that the present system has tended to centralization rather than to development; hence it is the Government of India that has mainly profited by the recent changes. The Provincial Government of Bengal is not as yet furnished with the early and punctual supply of meteorological information which it requires.

"The proposals aim at the removal of the defects enumerated in the preceding paragraphs, and at the carrying out of the object proposed:—

"1st.—By the establishment of additional observatories.

"2nd.—By the extension of the work of inspection.

"3rd.—By the increase of my office establishment.

"4th.—By frequent publication of returns.

"I propose in future meteorological reports and discussions to divide Bengal into seven areas, each of which will be a fairly homogeneous area, and differ from the others in its meteorological features, more especially the amount and distribution of its rainfall. Each of these areas will be represented by three to seven observing stations, giving all the meteorological features, except rainfall, with sufficient fulness for present purposes. The rainfall will be determined by these observing stations and the 156 additional rainfall recording stations, three to five of which will be linked to each observing station so as to enable the rainfall of the district represented meteorologically by the observing station to be approximately determined.

"The seven meteorological areas I propose are—

"1st—Orissa.

"2nd—South-West Bengal, including the Burdwan and Presidency Divisions.

"3rd—East Bengal, including the Dacca and Chittagong Divisions.

"4th—North Bengal, including the Rajshahye and Cooch Behar Divisions.

"5th—North Behar, including the districts of Behar north of the Ganges.

"6th—South Behar, including the districts of Behar south of the Ganges.

"7th—Chutia Nagpore.

"In order to assign an adequate number of observing stations, it will be necessary to increase the present number very considerably. This I propose to effect through the agency of the Public Works Department, which has been most freely offered for the extension. I am informed by Major Neill, Assistant Secretary, Public Works Department, that observations are taken at Buxar, Arrah, and Dehree, and that they could be taken at a large number of stations by overseers. These men are specially qualified by their training in surveying to read such instruments as the barometer, and would make valuable observers.

"The following are the stations which I have selected from the list given me by Major Neill where observatories could be established and the work of observation properly carried on through the agency of the Public Works Department:—

Motihari.	Rungpore.
Ranchi.	Dinagepore.
Chyebassa.	Serajgunge.
Balasore.	Mymensingh.
Midnapore.	Furreedpore.
Raneegunge.	Cornillah.
Nya Doomka.	Noakholly.
Bhagulpore.	Burrisal.
Julpigori.	Rampore Boalia.

Chupra.

"These, with the two stations of Buxar and Dehree, would give 21 additional observatories. This extension will necessitate the immediate erection of 19 observing sheds.

"The Public Works Department, in making the offer of the services of these overseers as observers, did not contemplate that they should receive any remuneration, and I am not therefore prepared to urge upon Government its absolute necessity. On the other hand, a small monthly allowance will not only give them a tangible interest in their meteorological work, but also furnish me with some hold upon them for the proper performance of their meteorological duties. There would thus be a reasonable probability of the additional observations being fairly trustworthy and accurate, and equal in value to those taken at our present observatories. My past experience shows that this would almost certainly not be the case if this additional work (not a part of their recognized duties) were imposed upon them without any remuneration. The monthly allowances would be granted conditional upon the punctual and accurate performance of their meteorological duties during the month, as tested by the returns received from them in my office. As the work would be less than at our present third class observing stations, I would suggest that these fourth class observers be granted allowances of ten rupees monthly. This will necessitate a yearly grant of Rs. 2,520. If these proposals be sanctioned, they will, I believe, give the department the increased power of observation, which appears to me necessary in the most effective and economical manner possible, and will remove almost entirely the first and second defects of the present system.

"As my meteorological duties are increasing year by year, I am unable to suggest any feasible plan which will enable me to inspect the observatories at any time throughout the year, whenever it may appear desirable or necessary. I would therefore suggest the appointment of a native inspector on Rs. 50 rising to Rs. 60 per mensem. It will be possible for this amount to obtain the services of a man who has been trained at the Seebpore or Roorkee Engineering College in the use of instruments, and has learnt to draw and chart neatly. He would supply a double want in the Bengal Office. Whenever the returns received indicated continued instrumental or observational defects at any station, he would be sent there to ascertain the causes of the errors, and thus enable me to remove them without unnecessary delay. When in Calcutta, he would be employed in preparing the various charts that

will be required to enable me to prepare the weekly reports. He would also be very useful during the first year of the extension in teaching the new observers of the Public Works Department their meteorological duties. As I do not propose to diminish my own work of inspection during the cold weather, which I consider indispensably necessary to the maintenance of the stations in a state of efficiency, it will also be necessary to provide for the travelling expenses of the native inspector. These, I estimate, will not exceed Rs. 400, which I would therefore ask Government to sanction in addition to his pay."

I have already stated that in future it appears to me desirable the rainfall returns should be considered and discussed in connection with the meteorological observations. The first essential for early publication of meteorological results is rapid transmission of the observations to the central office. Hence in all cases where it is possible, the 10 A.M. meteorological observations will be despatched to Calcutta by weather telegrams. At those observing stations where there is no telegraph office, the 10 A.M. observations taken daily will be sent by the first dāk after each observation to Calcutta by means of postal cards. The observations will be reduced and tabulated in my office as they arrive. Of the 38 stations under the extended scheme, 29 can communicate by telegraph at the present time; and with the probable early extension of rail and telegraphic communication to Jessore, Burrisal, Mymensing, and Chutia Nagpore, the number will increase, so that in a few years a fairly complete daily weather report for the whole province may be prepared from the weather telegrams. The majority of the stations which can communicate with the central office by post only are in Eastern Bengal; and hence the information of that part of the province will be for some time more imperfect and behindhand than for the remainder of this province.

All rainfall-reporting stations will send in a daily return of rainfall by means of postal cards. They will also, in all cases, submit a weekly rainfall report by post-card as a check on the daily returns in which mistakes from carelessness or haste may occasionally arise, or which may, in a few cases, be lost in postal transmission.

Those sub-divisional stations which are at a greater distance than 48 hours dāk from Calcutta will telegraph either directly or from the nearest telegraphic station (for which special arrangements in each case will be made), with the object of completing the daily returns included in the weekly rainfall report to be published in future in the Gazette.

It will therefore be seen that I propose to receive the various returns in all cases direct from the observing officers, and not, as at present, in the case of rainfall returns through the medium of a superior officer, as, for example, the Collector, the Civil Surgeon, &c. The delays in the submission of the rainfall returns under the present system are in some cases excessive, and are due to the transmission from the recording officers through other officials not directly interested in the rapid collection of the information. Of course, if it be desired, there is no reason why the Collectors, Civil Surgeons, &c., should not receive a copy of the rainfall returns sent in direct to me. If this part of the scheme be adopted—and it is the only means I can suggest for effecting the continuous rapid transmission of the necessary returns to my office—it would be very desirable that the Government of Bengal should issue a circular to the sub-divisional and other rainfall-recording officers, requesting them to carry out fully and exactly the instructions I shall issue for the transmission of their rainfall returns, and if judged desirable and unobjectionable, permitting me to place myself in direct communication with them in order to call attention to probable errors of observations or delays in transmission.

From the 15th of May to the 15th of November, a period which includes the whole of the south-west monsoon rain in Bengal, it is proposed to publish a daily weather report containing the observations taken at 10 A.M. and transmitted by ordinary or urgent weather telegram to Calcutta, together with a short summary of the more prominent features of the weather, its deviation from the normal weather of that day by a comparison with the average pressure and temperature of the day, and the important changes of the previous 24 hours, with, by-and-bye, anticipations of the weather throughout the province during the next 24 hours.

This will be printed at the Secretariat Press by 6 P.M. each day, and sent by post to Government officers, district officers, and to certain officers of the Public Works Department. It is also proposed to publish weekly in the Gazette two meteorological returns. The first will give the averages or totals of the elements of meteorological observation at the 38 reporting stations, and the average rainfall of the districts, represented meteorologically by each station, together with the variations of the pressure, temperature, and rainfall from the means for the period. The second return will give the daily rainfall at all the sub-divisional stations for the preceding week, and from which the average rainfall of the districts given in the other return will be derived. A summary will also be given, generally, similar in character to the weekly agricultural weather report issued by the English Meteorological Office. In this the important features of the weather will be brought to notice, and the distribution of rainfall with respect to time and place, and its variation from the normal rainfall, will be fully worked out.

In addition to this, it is also proposed to publish in the Gazette, for more general reference, the usual monthly averages of the elements of meteorological observation for the 38 observing stations, and the average rainfall of each district for the month, together with a short summary, stating briefly the more marked peculiarities of the meteorology of the month. A return will also be published in the beginning of every month, giving the daily rainfall of the 162 sub-divisional stations for the preceding month. This will be to a large extent a reproduction of the weekly rainfall returns, but it will contain all returns not received in time to be included in the corresponding weekly reports. Also any errors which may be detected during the month in the printed weekly rainfall returns will be eliminated, so that the monthly rainfall return will be the final, complete and corrected publication of the rainfall for the period in question.

Forms embodying these objects have been drawn up and submitted to the Government of Bengal. They have been accepted after a few modifications, and will be adopted for the present, and until experience of the working of the new scheme shews what improvements it may be desirable to make in them.

The extensions which I proposed supplemented the existing arrangements, and I had consulted with the Meteorological Reporter to the Government of India, who approved generally of the scheme. As the Meteorological Department is on the Imperial Establishment, it was necessary for the Government of Bengal to submit the proposals to the Government of India for sanction, and to indicate the sources from which the additional expenditure was to be met. This was done in Mr. Secretary MacDonnell's letter No. 294—68Mis.F, dated the 29th January 1883, to the Government of India, Revenue and Agricultural Department, in which he stated that, "finding the present Bengal meteorological reports inadequate for the purpose of administration in this province, the Lieutenant-Governor called on Mr. Eliot to prepare and submit a scheme calculated to afford this Government that detailed information regarding the meteorological conditions of all parts of this province, of which it now feels the want. This scheme Mr. Eliot submits in the papers herewith forwarded, and the Lieutenant-Governor requests that His Excellency the Governor-General in Council may be moved to sanction the adoption experimentally of Mr. Eliot's proposals in this presidency. It will be observed that the proposals now submitted are purely supplementary of existing arrangements which they in no way modify, and may be at any time annulled without any disturbance of the latter. The entire cost of the improvements will fall on Provincial Revenues. I am to add that any conditions as to control, &c., the Government of India may think it, in the interests of the Imperial Meteorological Department, necessary to impose, will be readily accepted by this Government."

The Government of India replied that it was willing to accept these proposals, and sanctioned the scheme which had been prepared with so much care by the Meteorological Reporter to the Government of Bengal. It was further stated that "such control as may be necessary will, in the interests of the Imperial Meteorological Department, be most conveniently exercised by the Meteorological Reporter to the Government of India. In view of this object, the Government of India considers that the cost of the scheme should be treated as a contribution from Provincial to Imperial funds, and that provision for this additional expenditure should be made in the estimates of the Meteorolo-

gical Department of the Government of India, with effect from the 1st April 1883. Unless His Honor the Lieutenant-Governor has any objection to urge to this proposal, it will forthwith be carried into effect."

The extensions are now being effected as rapidly as circumstances will permit, and will be fully stated in next year's Administration Report.

Second Class Observatories.—These are seven in number, of which five are situated in Bengal and the remaining two in Assam. The following table gives the Superintendents and observers at these observatories during the past year:—

STATIONS.	Superintendents.	Superintendent's allowance.	Observers.	Observer's allowance.	Assistant observers.	Assistant observer's allowance.
		Rs.		Rs.		
Sibsagar...	Dr. R. M. Meiklejohn (1).	30	Baboo Dandadhor Dutt Barua* (2).	30	Baboo Ratneswar Gogoi.	10
Dhubri ...	" J. Mullane ...	30	Munshi Moniruddin Ahmed.*	30	Munshi Kadimuddin (3).	10
Bankipore. {	" J. C. Shaw (4) ...	30	Munshi Mohubbut Lal.	30	Munshi Kinfait Ulla, Offg.	...
	" J. G. French (5)...	30			Munshi Muddun mohun Lal.	10
Hazaribagh.	" R. Cobb ...	30	Mahomed Ammeer (6).	30	Nathoo Lal, (7) ...	10
			Nathoo Lal (8).	...	Dwarkanath (9) ...	...
			Baboo Heralal Seal (10).	45	Nil.	...
Saugor Island.	Nil ...	.....	Mr. E. B. Swatman (11).	...	Nil.	...
			Baboo Heralal Seal (12).	...	Nil.	...
			Mr. A. J. Moth (13).	...	Nil.	...
Cuttack ...	Nil ...	.....	Mr. J. C. Smith†	32	Mr. H. W. Alley (14).	13
					Mr. S. Adams (15).	...
					Mr. H. W. Alley (16).	...
Chittagong	Nil ...	.....	" E. Pereira (17)	32	Mr. J. Dias ...	13
			" P. O. Pereira	...		

(1) From 1st April to 15th September 1882, and from 28th October 1882 to 31st March 1883.

(2) Was in charge of the observatory from 16th September to 27th October 1882.

(3) On leave from 22nd July to 9th September 1882.

(4) 1st April to 1st December 1882.

(5) 2nd December 1882 to 31st March 1883.

(6) 1st April to 27th June 1882 when he was dismissed.

(7) 1st April to 27th June 1882.

(8) 28th June 1882 to 31st March 1883.

(9) Ditto ditto.

(10) 1st April to 18th October 1882.

(11) 19th October to 1st November 1882.

(12) 2nd November 1882 to 20th January 1883.

(13) 21st January to 31st March 1883.

(14) 1st April to 4th July 1882.

(15) 5th to 15th July 1882.

(16) 16th July 1882 to 31st March 1883.

(17) 1st April to 8th November 1882.

(18) 9th November 1882 to 31st March 1883.

* Received special allowance of Rs. 5 per month for good services.

† Received special allowance of Rs. 10 per month for good services.

Five of these observatories are furnished with self-registering anemographs. There were one or two breaks in the working of these instruments during the year, which are detailed in the following table:—

STATIONS.	Date of commencement of work.	Periods during which instrument was out of order during 1882-83.
Dhubri ...	18th March 1882 ...	...
Hazaribagh ...	15th April 1880 ...	From 17 hours 30th April to 17 hours 31st May 1882. Seventeen hours 30th November to 10th hours 15th December 1882.
Chittagong ...	20th June 1879 ...	1st April to 8th July 1882.
Saugor Island ...	9th February 1880 ...	9th January to 22nd February 1883.
Cuttack ...	11th April 1879 ...	.....

Three of these observatories, viz. Bankipore, Hazaribagh, and Cuttack, were visited during the cold weather.

Hazaribagh was reported on unfavourably last year. This, which was formerly one of the most satisfactory of the Bengal observing stations, had fallen off solely in consequence of the indolence and carelessness of the observer. He was fortunately detected by the Superintendent in recording and sending to the Meteorological Office inaccurate and false statements, and was consequently dismissed from Government employment. The second observer was then appointed first observer, and appears to have done his work satisfactorily throughout the past year. The observatory was inspected on the 8th December 1882. No change has been made in the position of the shed during the past year 1882-83, or of the instruments since my last visit in December 1881. The shed was clean and in good order. The anemograph tower required some slight repairs to make it watertight. These have since been made.

The instruments were generally clean and in proper working order. The only instruments which were not perfectly satisfactory were the wet and grass minima thermometers. In both of these the columns were badly broken. The instruments had, I was informed, given much trouble in this respect for some time previous. They were ordered to be replaced by new instruments. The anemograph was not working when I inspected the observatory, in consequence of the clock requiring cleaning. I found, however, that this instrument had been sadly neglected by the previous observer, and that it had not been in proper working condition for some months in consequence of two defects, both affecting the wind direction. The instrument had evidently not been cleaned or oiled for months. The gearing of the wind vane had consequently become rusted to such an extent as to make the vane immovable under the action of any wind of ordinary strength. The chain connecting it with the recording part of the instrument had also lengthened slightly, and was badly adjusted, and too slack to work properly. These defects were repaired, and the observer taught how to oil it and to take it to pieces. Full instructions were also given to him to oil and clean it at regular intervals. The defective condition of the anemograph was, I found, mainly, if not entirely, due to the neglect and indolence of the previous observer. The observer and assistant observer read the instruments carefully and accurately. The present observer is intelligent, takes much interest in his work, and sends in his returns regularly. Hazaribagh thus promises to regain its former character as an observing station.

The Bankipore observatory was inspected on the 20th and 21st of December. No change has been made in the position of the instruments since Mr. Pedler's visit. The shed is in good order and has been protected by a fence. Strong ladders have been built to give ready access to the anemometer and wind vane on the roof of the building. The barometer was examined, and a long series of comparisons made by the observer and myself with two secondary standard barometers. The comparison seemed to indicate that the instrument has a variable index error, and that the amount of its error was on the average of the observations made during my visit somewhat less than that assigned to it by the original comparison at Alipore. It was therefore replaced by one of the standard instruments, and ordered to be returned to Calcutta for a careful examination and redetermination of its index error. All the instruments were, with the exception of the barometer, in good order, and very clean. This observatory has improved very much since Mr. Pedler's visit, and is now in a satisfactory state.

The Cuttack observatory was inspected on the 11th of January. This observatory has been under the charge of Mr. Smith, Telegraph Master, for the past 11 years. I found the observatory in the same thoroughly satisfactory condition as on my last visit two years previously.

The Cuttack, Dhubri, and Saugor Island observatories are the best of the second class observatories. I was unable to visit Dhubri during the year, but judging from the accuracy of the observations and the neatness of the returns, I am confident that it has improved considerably during the past year. The observer has, moreover, on more than one occasion, sent valuable series of observations taken during storms. As he has been observer for many years, and continues to shew increasing interest in his work, I have recommended him for the higher personal allowance of Rs. 10. Sibsaugor continues to work satisfactorily. Patna and Hazaribagh have both improved greatly, and may be

considered as having regained their former character. The second class observatories are thus generally in a satisfactory condition and the observers are performing their duties accurately and honestly.

Third class Observatories.—These were thirteen in number at the end of

the year. Ten of them are in Bengal, one (Akyab) in Burma, and two (Silchar and Tura) in Assam. The Tura observatory was established during the year at the suggestion of the Assam Government, and promises to give useful information for the eastern half of the Garo Hill district.

Eleven of these are maintained solely by Government, one (Durbhunga) is supported by the Rajah of Durbhunga, and another (Demagiri) is a voluntary observatory established under rules sanctioned by the Government of India.

The following table gives the list of the third class observatories, with the Superintendents and observers of each, during the year 1882-83:—

Third class Observatories.

STATIONS.	Superintendents.	Observers.	Observer's allowance.
			Rs.
Darjeeling, St. Paul's School.	R. Carter, Esq., Rector, St. Paul's School.	Mr. W. Moore	25
Purneah	Dr. Picachy	Baboo Russick Lal Bose (1) " Rajanikanta Chackravarti (2) " Russick Lal Bose (3)	15
Durbhunga	" J. French-Mullen (4) " J. C. Shaw (5) Baboo Gopal Chandra Bose (6) Dr. W. A. Gilligan (7)	" Jogin Chandra Banerjee	.....
Gya	" R. MacLeod	" Nowrangee Lal	15
Berhampore	" S. M. Shircore	" Mohendra Nath Roy†	15
Burdwan	" J. O'Brien (8) " H. B. Purves (9)	" Mokhoda Prosad Chowdhury†	15
Jessore	" D. W. D. Commins	" Poreah Nath Chowdhury	15
Dacca	Nil	Mr. E. D. Shave (18) " J. S. Davids (19)	25† 15
Silchar	" J. J. Monteith	Baboo Romes Chandra Bhadra " Nobin Chandra Ghose (10) " Bhagarath Barmah (11) " Surjya Kumar Ghose (12)	15 Nil.
Demagiri	Nil	" Mr. E. Workman (13) " J. M. Bennett (14) " P. G. Pote (15) " H. J. Smythe (16) " R. J. Keys (17)	25 25 15** 15 15
False Point	Nil		
Akyab	Nil		
Tura	Civil Medical Officer		

- (1) 1st April to 16th July 1882.
- (2) 17th July to 31st October 1882.
- (3) 1st November 1882 to 31st March 1883.
- (4) 1st April to 13th December 1882.
- (5) 14th December 1882 to 6th March 1883.
- (6) 7th March to 16th March 1883.
- (7) 17th March to 31st March 1883.
- (8) 1st April to 24th October 1882.
- (9) 25th October 1882 to 31st March 1883.
- (10) 1st April to 9th December 1882.
- (11) 10th December 1882 to 11th January 1883.

- (12) 12th January to 31st March 1883.
- (13) 7th August 1882 to 31st March 1883.
- (14) 1st to 3rd April 1882.
- (15) 4th to 18th April 1882, and 4th June to 8th September 1882.
- (16) 9th September 1882 to 15th February 1883, and 22nd February to 31st March 1883.
- (17) 19th May to 3rd June 1882, and 16th February to 21st February 1883.
- (18) 1st April to 28th December 1882.
- (19) 28th December 1882 to 31st March 1883.

* Received special allowance of Rs. 5 per month.
† Ditto ditto " 10 "
‡ From 28th December 1882.
§ 9th September 1882.

I was able to visit the whole of the third class observatories during the College cold-weather vacations, with the exception of Jessore, Silchar, and Akyab. No change was made during the past year in the character of the observations or the condition of the observatories. My opinion of them is unchanged. Some of them are quite equal to the second class observatories as regards the accuracy and value of their observations. In others occasional carelessness and neglect of the instructions laid down in the *Vade Mecum* diminish very considerably the value of the observations, and introduce an element of doubt into the results of their work.

The following accounts of the observatories which were visited during the cold weather are taken from my inspection reports:—

"I visited the Darjeeling observatory on the 16th and 17th of November. The shed was in capital condition; the instruments clean and in good order,

and properly placed. The Casella's anemograph had been properly placed in position before my visit in November. The shed in which it is placed is on a fine open site on the top of a hill above St. Paul's School. When I was there the air was perfectly calm, so that I had no opportunity of seeing the instrument working under ordinary conditions. I examined it carefully and made several changes. It has been working since, and the observer, Mr. Moore, has spent much time, labour, and ingenuity in endeavouring to make it work successfully, but the results are not altogether satisfactory. The traces received lately are sufficiently distinct to enable them to be used for the determination of the elements of wind observation. So far as I can judge, the instrument is not a good one, and I should prefer to see it replaced by a Beckley's anemograph, which gives a continuous record. Experience appears to shew that the Beckley's is easier to work and less liable to derangement.

"The Purneah observatory was inspected on the 23rd, 24th, and 25th of December 1882. The shed is on the same site as it occupied on my last visit two years ago. I found that the foundations of a house for the jailor had been laid within a few feet of the observatory, and the building itself would be shortly erected. It was therefore necessary to give orders for the early removal of the observatory. A suitable site was selected where the conditions of exposure are almost identical with those of the present observatory. The shed itself was in fair order. No repairs had been made for some time in view of its removal to another site. The thermometers were all clean and in good order. The barometer was in the same room as two years ago. As the light in it is bad, I removed the barometer to an adjacent room at the same level, and where it is in good light. The barometer was carefully compared at the dāk bungalow by myself, and its index error was ascertained to be unaltered. The wind vane and anemometer are well placed. They were slightly stiff in consequence of not being oiled frequently enough. The anemometer was carefully oiled and cleaned, and the observer instructed how to keep it in proper condition. He read the anemometer somewhat imperfectly. This was partly due to his having overlooked the instructions in the *Vade Mecum*. He learnt quickly, and I hope the anemeter observations at this station will in future be exact. The observer is intelligent and punctual in his work, in which he appears to take much interest. The observatory, on the whole, is in a satisfactory condition.

"Durbhunga was inspected on the 20th and 21st of December 1882. I arrived at the observatory at 4-7 P.M. by the dispensary clock, and found the observer there. On enquiring about the 4 P.M. observations, I was shewn the following entries for that day:—

		10h.	16h.	18h.
Barometer	...	30.130	29.030	
Attached thermometer	...	66.5	71	
Dry bulb	...	67	74	
Wet "	...	62	65	
Dry max.	...	.....	.....	74.8
" min.	...	54.5	.....
Wet "	...	53.5	.....
Grass "	...	41.5	.....
Sun max.	...	.....	.....	118
Anemometer	...	248.4	265.3	
Wind direction	...	22	22	

The observer was then asked to read the barometer, and stated that it was 29.980. I read it myself and found it to be 29.968. The reading entered in the form B, even if corrected to 30.030, was thus erroneous. The observer then endeavoured to excuse himself by asserting that he had been at the Magistrate's court and that an assistant had taken the readings. As it was unnecessary for me to ascertain more than I did (*viz.* that the observations at Durbhunga on this day, and probably, as indicated by the returns, for some time previous, had been taken in an exceedingly careless and irregular manner, and that little or no attention has been paid to the various instructions and orders issued from time to time for his guidance), I made no attempt to verify his statements. No excuse whatever can be admitted in extenuation of the offence of entering the observations as having been taken at the exact times noted, when, in reality, they have been knowingly taken at

some other entirely different hour. In addition to the evident mistakes in the 4 P.M. readings, observations purporting to be taken at 6 P.M. had been taken at or before 4 P.M.

The condition of the observatory indicated great carelessness on the part of the observer. The thermometers were in very fair order, except that they were generally somewhat dirty. The minimum wet bulb and ordinary wet bulb were covered with a thickish encrustation.

The wind vane worked slowly and heavily. This was accounted for by the fact that it had not been oiled for some months. The anemometer was excessively dirty, and was covered with dust inside and outside. No oil had been given to it for months. In consequence of the dust and want of oil, the instrument moved with much friction. It is evident that the anemometer observations have been of little value for some time past. The Durbhunga observer was informed that carelessness in observation, or laxity with regard to hours of observations, once clearly detected in an observer, throws a doubt for a long time over future observations, and that it would therefore take long for him to thoroughly re-establish a character for accurate work; and was informed that he would probably lose his personal allowance of Rs. 5 per mensem." I referred the matter to Mr. Blanford, explaining to him the peculiar condition of the observatory and the promise of the observer to do good honest work in future. He requested me to fine the observer ten rupees as a mark of his serious displeasure, and to warn him that the detection of my similar faults in the future will be certainly followed by the withdrawal of the personal allowance.

"Gya was inspected on the 11th and 12th of December 1882. No change has been made in the position of the instruments since my last visit, and the shed was in perfect order. The barometer was carefully examined, as the barometric observations had been unsatisfactory for some time. The readings for some months, as indicated by the observations at the neighbouring stations, had been much too high. A long and careful comparison made by myself at the dāk bungalow proved that no change had taken place in the index error of the instrument since its issue to Gya. I, however, found, when the observer was asked to take a reading of the instrument, that he immersed the fiducial point well into the mercury in the cistern, instead of setting it so as to touch exactly the mercurial surface. This error at once explained the high readings at Gya. I spent several hours in endeavouring to teach him to adjust the level of the mercury to the fiducial point, and in reading the instrument with fair results. The observer attributes his error in this respect, chiefly to failing sight. This was, however, not confirmed by the Civil Surgeon. It is therefore more probably due to carelessness, and he was warned on this point to be much more careful in future. The instruments were all in good order. The observer, I found, read the anemometer very imperfectly, and it was necessary to spend some time in training him to read it correctly. The condition of the Gya observatory, in consequence of these imperfections on the part of the observer, has been for some time far from satisfactory.

"Berhampore was inspected on the 28th of December 1882. The instruments have been housed in a new shed since my last visit. The shed is very neatly built and is in capital condition; the instruments were clean and in thoroughly good working order. This observatory is in almost every respect one of the best kept in Bengal, and reflects great credit on the observer, who is, I have every reason to believe, as accurate in his observations as he is interested in the neat appearance of his observatory.

"Burdwan was inspected on the 29th December. I found both the shed and instruments in perfect order. The observatory is in thoroughly satisfactory condition and continues to maintain its high character."

Dacca was inspected at the end of November. The shed is situated in the compound of the Telegraph Office in a fairly exposed position. It was in good condition, and the instruments clean and in excellent order. This observatory was last visited by Mr. Pedler in December 1878, when it was favourably reported upon.

The observatory at False Point has been located at the Jumboo Telegraph Office for the past four years. This office was closed on the 25th of April 1882. No previous intimation was given to me of this change. The observations

at False Point were then suddenly broken off, and I was unable for some time to make any arrangement for the re-establishment of the observatory. In August the light-house was connected by telephone with Cuttack. This enabled me to re-establish the observatory under its former conditions before its removal to Jumboo, and at the same time to preserve the advantage of telegraphic communication with Calcutta. It was not considered advisable to erect a shed until the cold weather. Mr. Workman, light-house keeper, took the greatest interest in its re-establishment at the light-house. He procured the instruments from Jumboo and placed the barometer in the lower room of the light-house and the thermometers temporarily in a verandah facing the north, and forwarded daily telegrams of the height of the barometer, wind, direction and force, rainfall, &c., from the 7th of August. I visited False Point in January, and in conjunction with Mr. Workman selected a suitable site for the new shed and for a pillar, on which to erect the wind vane and anemometer. This station is a very important one in connection with the Storm Signal Office, and it is to be regretted that the telephonic mode of communication usually fails during stormy weather. Mr. Workman informs me that he has frequently spent a couple of hours, shouting himself hoarse, in endeavouring to communicate with Cuttack during windy and stormy weather. If the Telegraph Department could arrange to improve the communications between the light-house and Hookeytollah or Cuttack, the False Point observatory would be, under its present conditions, one of the most satisfactory and important of my observatories.

Of the third class observatories Berhampore, Burdwan, Dacca, Darjeeling, and False Point take first rank for the accuracy and value of their observations. Purneah is now a fairly satisfactory observatory. Silchar and Jessore I was unable to visit during the past year, and can only judge of them by their returns. So far as they indicate, these two observatories have improved during the year, more especially Jessore, the returns from which have been nearly prepared and sent in with commendable regularity.

Durbhanga and Gya have been the most unsatisfactory of my stations during the past year. At Durbhanga the observer had allowed himself to fall into very careless habits and methods of observations, and I hope after the leniency shewn to him he will use every effort during the present year to submit accurate observations and keep his instruments in such a condition as to be fit for inspection at any moment.

Akyab has been also a somewhat unsatisfactory station during the past year. I recorded my opinion in the Administration Report for 1881-82 that it was not quite satisfactory, as frequent mistakes were made in the transmission of weather telegrams. It is an important station from its position on the Arracan coast. I regret to have again to record that numerous mistakes have been made in the preparation of the weather telegrams, due either to haste or carelessness. In the month of August last ten of the thirty telegrams despatched were erroneous in one or more particulars. The ordinary returns also frequently contain errors, and it is only too probable that the carelessness shewn in the preparation of the telegrams and ordinary returns extends to the work of observation itself. It contrasts most unfavourably in these respects with Cuttack, Dacca, and Sauger Island, at all of which Telegraph Masters are observers.

Rainfall-recording stations.—Regular rainfall returns have been received during the past year from 164 sub-divisional stations. During the past year two stations—Segowlie and Baripore—have ceased to send in returns, as they are no longer sub-divisions; on the other hand rainfall returns were received during a part of the year from three new stations—Netrokona, Banki, and Hookeytollah (False Point). The number of stations submitting rainfall returns at the end of the official year was 162.

These returns were submitted in the great majority of cases punctually, and the monthly return of rainfall throughout the provinces for each month of the past year, prepared from these returns, was published in the Gazette on the third or fourth week of the ensuing month.

Instruments.—The two following tables shew the number and kind of instruments that have been broken or lost or rendered unserviceable at the Bengal observatories during the year 1882-83, and of the instruments supplied

to the observatories to replace broken, deteriorated, or untrustworthy instruments.

Return of Instruments broken or otherwise injured at the Observatories in Bengal and Assam, 1882-83.

STATIONS.	Barometer.	HYGRO-METER.		Dry maximum.	MINIMUM THERMO-METER.		RADIATION THERMO-METER.		Anemometer.	Wind vane.	Rain-gauge.	Measure glass.	Lens.	Clock.	Sand-glass.
		Dry.	Wet.		Dry.	Wet.	Solar.	Grass.							
Patna	(c) 1
Cuttack
Chittagong
Saugor Island	(a) 1	...	...	...	...	...	...
Hazaribagh	(a ¹) 1	...	...	...	...	...	...	...
Purneah
Burdwan
Berhampore	(b) 1	(a) 1	...	...	...	...	...	...
St. Paul's School, Darjeeling	(d) 1	...	...	...	...	...	...	...
Jessore
False Point
Dacca	(a) 1	...	...	...	...	...	...
Durbhanga
Gya	(a) 1	(a) 1	(d) 1	(d) 1	...	...	...	...
Akyab
Gopalpore
Sibsagor
Dhubri
Cachar
Tura
Demagiri

(a) Out of order.
(a¹) Condemned.
(b) Cracked.

(c) Broken in transit.
(d) Broken.
(e) Stolen.

Return of Instrument, &c., issued to the Observatories in Bengal and Assam in 1882-83.

STATIONS.	Barometer.	HYGRO-METER.		Dry maximum.	MINIMUM THERMO-METER.		RADIATION THERMO-METER.		Anemometer.	Wind vane.	Rain-gauge.	Measure glass.	Lens.	Clock.	Sand-glass.
		Dry.	Wet.		Dry.	Wet.	Solar.	Grass.							
Patna	1†	...	...	...	...	...	...	...	...	...	...	...	...	...	(d) 1
Cuttack	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chittagong	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Saugor Island	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hazaribagh	...	1†	1†	1†	1†	2†	...	(c) 1	(c) 1	...	...	...	...	...	...
Purneah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Burdwan	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Berhampore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
St. Paul's School, Darjeeling	(b) 2†	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jessore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
False Point	(a) 2†	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dacca	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Durbhanga	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gya	(a) 1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Akyab	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gopalpore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cocanada	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sibsagor	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dhubri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cachar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tura (Garó Hills)	(b) 1	(b) 1	(b) 1	(b) 1	(b) 1	...	...	...	...	(b) 1	...	(b) 1	...	...	...
Other stations (rain-recording)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

• Supplied for the first time.
† Old instruments returned for verification.
(a) For comparison.
(b) To start observatory.
(c) To replace old and worn-out instruments.
(d) One broken in transit.

Comparatively few instruments were broken during the year. At Gya the terrestrial radiation thermometer was broken to pieces by a stone thrown from a road outside the compound. An exposed grass radiation thermometer disappeared at Dhubri under circumstances which indicated that it had been probably stolen by coolies travelling up to the Assam tea gardens, a depot for whom is within a few yards from the observatory. The instrument which was broken at Akyab is reported to have fallen by accident to the ground when it was being examined by the observer.

During my tour of inspection I condemned several instruments, more especially alcohol minimum thermometers, which frequently deteriorate rapidly in India, and ordered them to be replaced by new instruments. This, for example, explains the issue of thermometers to Hazaribagh, Berhampore, Patna,

and False Point. On the whole the instruments appear to have been carefully looked after during the past year.

A third table is added (for the first time) showing the instruments that have been returned by the several observatories for various reasons and made over to the store of the Meteorological Reporter to the Government of India.

Return of Instruments, &c., returned to store of the Meteorological Office, India, during 1882-83.

STATIONS.	Barometer.	HYGRO-METER.		Dry maximum.	MINIMUM THERMO-METER.		RADIATION THERMO-METER.		Anemometer.	Wind vane.	Rain-gauge.	Measure glass.	Lent.	Clock.	P.d.	Sand glass.	Standard thermometer.	Thermometer cage.
		Dry.	Wet.		Dry.	Wet.	Solar.	Grass.										
Patna ...	1°	1°	1°	1°	1°	1°	1°	...	2°	...	...	...	...	...	1(a)	...	...	1°
Cuttack ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chittagong ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Saugor Island ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1(a)	1(a)	...	...
Hazaribagh ...	...	1°	1°	1°	1°	2°(c)	...	1(c)	...	...	...	...	...	...	...	...	...	...
Purneah ...	...	1°	...	1°	1(c)	...	...	...	...	...	...	...	...	...	...	...	...	...
Burdwan ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Borhampore ...	...	...	...	...	...	...	1(d)	1(c)	...	...	...	...	...	...	...	...	...	...
St. Paul's School, Dar- jeeling ...	1°	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Telegraph Office, Dar- jeeling ...	2†	1°	1°	...	...	...	1°	...	...	...	1(a)	...	...	...	...	...	...	1°
Jeasore ...	...	...	...	...	...	...	1(a)	...	...	...	...	...	...	...	...	...	...	1(a)
False Point ...	1°	...	...	...	...	...	...	...	...	2°	1°	...	...	...	...	...	...	1°
Dacca ...	...	...	...	...	...	...	...	...	1°	...	...	...	...	...	...	...	...	...
Burbehanga ...	...	...	...	...	...	...	...	...	(a)	...	...	...	...	...	...	...	...	...
Gya ...	1°	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Akyab ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gopalpore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cannada ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sibangor ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dhulri ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cachar ...	...	...	...	...	...	...	1(c)	...	...	...	...	...	...	...	...	...	...	...
Tura ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* Serviceable.

† Unserviceable and broken.

(a) Repairable.

(b) A stray instrument not issued from our store, but was found in the observatory store on inspection and brought down here.

(c) Out of order.

(d) Cracked.

(e) Of the old pattern.

No change was made during the year in the ordinary routine of the office. The following returns have been prepared during the year for publication in the *Calcutta Gazette*:—

1st.—Monthly summaries of the meteorological observations taken at twenty observatories in Bengal and Assam.

2nd.—Monthly statements of rainfall at 162 sub-divisional and other stations in Bengal, and in the same form as last year.

3rd.—A table shewing the monthly and total rainfall for the year 1882 at 162 stations in Bengal.

4th.—A table giving the average monthly and annual rainfall at 156 stations in Bengal, based on the rainfall returns up to 31st December 1882.

5th.—Comparison rainfall table for the year 1882, shewing the monthly and total variation of the rainfall of 1882 at 162 stations, from the mean rainfall given in the preceding table.

My time has been more fully occupied than usual during the past year, and I have thus had less leisure to devote to meteorological investigation apart from the ordinary routine of my work.

I have nearly finished an analysis of the storm of October 1882, which possessed several features of interest. It occurred during the October transition period when there is a tendency for any vortex that is formed in the Bay to develop into an intense and severe cyclone. Although it formed at the most dangerous period during pre-existing conditions, which are known to be favourable to cyclonic formation of the Bay, some condition or action was absent, or very feebly developed, which prevented the storm acquiring great intensity. It was due to, and accompanied a large shallow depression with, moderately high gradients on the outskirts of the storm area. The aqueous vapour condensation, judging from the appearance of the sky during the storm, seems also to have taken place at a comparatively low level. It was economically chiefly remarkable as giving the heaviest and most general burst of rainfall to Bengal during the south-west monsoon of 1882.

In several respects it resembled the storm of September 1878, the account of which I drew up last year, and which was published during the present year as the first paper in the second volume of the meteorological memoirs.

I also took up for discussion all the storms which occurred in the Bay of Bengal during the period 1875 to 1880, of which there are records in the office, with a view to determine the relations between storm occurrence in the Bay and the general character of the monsoon, and also, if possible, the distribution of south-west monsoon storms in the Bay with respect to time and place.

This I find will take longer to work out than I originally expected, but I hope to finish it in the course of the present year.

Storm signals.—In my last year's report I stated that I had submitted to the Government of Bengal proposals for the extension of the system of storm signals for warning the Port of Calcutta of the approach of cyclones. The original object of this part of the work of the Bengal Reporter was to forewarn the port of the approach of severe cyclones, such for example as those of 1864 and 1867, in order that captains of vessels, &c., might prepare for the advent of the attendant destructive storm-wave. Recent experience has, however, shown that, although severe cyclones accompanied by storm-waves are of comparatively rare occurrence at the head of the Bay, cyclonic storms of limited extent and intensity are, on the other hand, frequently formed during the rains, and are a source of danger to shipping entering or leaving the mouth of the river. The storm signals hitherto employed were only intended to give warning of the formation and approach of storms of the first kind; hence it became necessary, if the Department was to give warning of the advance of storms dangerous to shipping in or near the mouth of the river, as well as to shipping in the Port, to extend or modify the system of signals. This I did with the assistance of Mr. Elson, Master Pilot, in such a way as not only to differentiate between the intense cyclones of the transition periods, and the feebler cyclonic storms of the rains, but also to indicate roughly what part of the Bengal coast they are approaching and likely to cross. The Government of Bengal sanctioned the proposed signals on the 5th of August 1882.

The adoption of the new system of storm signals was duly notified in the *Calcutta Gazette* on the 9th August 1882. They were brought into operation almost immediately afterwards, and as soon as the new signals could be prepared and despatched to the signal stations. Signals giving warning of the existence of any dangerous storm near the head of the Bay will in future be hoisted for the information of the pilots, captains of vessels, &c., at Saugor Island, Mud Point, and Diamond Harbour. Signals will in future be hoisted in Calcutta only before the approach of a severe cyclone with a storm-wave of sufficient magnitude to be probably dangerous and destructive to shipping in the port. The storm signals in the port of Calcutta will be hoisted in the following positions:—

- 1st.—On the Port Commissioners' office.
- 2nd.—On a flagstaff at Seebpore, nearly opposite to the Fort.
- 3rd.—On the yardarm of a flagstaff near the Government Dockyard, Kidderpore.

No severe cyclone occurred in the Bay during the year 1882. Six cyclonic vortices formed near the head of the Bay, and advanced across the Bengal or Orissa coast into the interior. These were—

- 1st.—Storm of June 8th to 17th, which ushered in the south-west monsoon. The centre crossed the Orissa coast on the 10th.
- 2nd.—Storm of 16th to 23rd of July. This crossed the Bengal coast near the mouth of the Hooghly on the 19th.
- 3rd.—Storm of 5th to the 14th of September, which crossed the Orissa coast between False Point and Balasore on the 7th.
- 4th.—Storm of the 14th to 19th of September, which advanced across the Orissa coast on the 16th.
- 5th.—Storm of the 26th of September to the 3rd of October. This crossed the Orissa coast on the 28th.
- 6th.—Storm of the 12th to 17th of October, which formed near the coast of the Northern Circars, crossed the Ganjam and Orissa coast, probably between Gopalpore and Pooree early on the morning of the 15th, and then proceeded northwards into Northern Bengal.

Four of these storms, viz. 2, 4, and 5, although accompanied with moderately strong winds and a rough sea, did not appear to be of sufficient intensity to justify the hoisting of the storm signals. Warning signals were hoisted for storms Nos. 3 and 6. On the approach of the 3rd storm bad weather signal No. 7 was hoisted on the 7th September at 12-30 P.M., intimating that a small cyclonic storm was advancing to the east of the Hooghly. This was changed on the receipt of further information to storm signal No. 8 at 7-30 A.M. of the 8th. The signals were taken down at 2 P.M. of the 9th. During the sixth storm, signal No. 5, intimating the existence of a storm which would cross the west coast south of False Point was hoisted at 2 P.M. of the 14th; the signals were taken down at noon of the 16th.

Daily Weather Reports.—These have been published during the past year in the same form as during the previous. They were supplied to 27 subscribers and to 23 Government officials at the commencement of the official year, and to 29 subscribers and 30 Government officials at the end of the year. The receipts during the year from subscriptions have covered the cost of printing and distributing the reports. There was a small balance of Rs. 105 at the end of the year, which was kept in hand in order to meet any charges for repairs to the lithographic presses.

The report has hitherto been published on an awkward, large-sized sheet of inferior paper which has detracted considerably from its appearance. By reducing the size of the form considerably, I have been able to obtain paper of much better quality for the report and chart. Through the courtesy of the Superintendent of the Lithographic Department of the T. G. Survey, I was supplied with a neat chart and form from which to prepare the daily reports. The report will thus in future (from May 15th) be issued in a neater and more compact form. Although the number of subscribers has not increased much, I believe the report and chart are found to be of use. I should be glad to see the number of subscribers increased, so that the subscription could be reduced from Rs. 2 per mensem to Rs. 12 per annum.

Marine Meteorology.—A fair amount of work has been done in this during the past year. The Government of India sanctioned additions to the previous office establishment with effect from the 1st of April. The work proposed to be done under this head consisted of two parts. The first is the discussion of the observations taken on board vessels navigating the Indian seas, collected by the Board of Trade in England some years ago, and made over to the Indian Meteorological Office; and the preparation of charts embodying the information given by these observations of the pressure, winds, currents, &c., in the Bay of Bengal and Arabian Sea. During the early part of the year the barometric observations were taken up with a view to determine the amount and character of the diurnal oscillation in the Bay. The curves have been worked out for all the months, excepting December, and are ready for publication whenever it may be considered desirable to do so. Shortly after Mr. Dallas, Scientific Assistant, came down to Calcutta from Simla, he took over the work of tabulating and charting the data. Four additional clerks were engaged. The barometric and wind data for January were gone through and tabulated, and the results charted. The second branch of the work of the Department is the collection of current meteorological data of the Bay of Bengal from every possible available source. Forms were prepared in accordance with suggestions made by the Port Officer. A supply of these is included in the papers handed by all pilots to the captains of vessels entering the river on taking piloting charge. A large number of captains have complied with the request of the Department to furnish extracts of meteorological data in these logs for the Bay of Bengal and Indian Sea. Three hundred and forty-five sets of returns were filled up and sent in to this office. Many of these are of great value, and shew that accurate meteorological observations are taken on board a fair proportion of the ships navigating the Bay of Bengal. The information contained in these has been extracted and entered in books for permanent record in such a way that the information for any one day is collected together. The information they give is also being added to the daily weather charts for India, prepared in the India Meteorological Office. I have not had time to go through this information as fully as I should have wished, but the extracts I have considered indicate clearly the general truth of what I had previously

surmised, viz. that the weather in the whole extent of the Bay, excluding the Andaman sea, is fairly indicated by the observations taken at the coast stations, and that the progress of every important storm may be traced and followed with more or less exactness almost from its origin, from the shore observations.

In addition to this information, observations with verified instruments have been taken at 10 A.M. and 4 P.M. on board the light vessels near the mouth of the Hooghly. The following gives the dates from which returns have been received during the past year:—

Meteor from May 1882.
Star " June "
Comet " August "
Mermaid " November "

The observations taken on board these vessels are, I have every reason to believe, after careful examination, to be accurate and trustworthy. They are very valuable as extending our knowledge of the meteorology of this part of India to a distance of 40 miles beyond the coast seawards.

FINANCE.

The following statement gives the total cost to the State of the Bengal Meteorological Department during the year 1882-83:—

	Rs.	A.	P.	Rs.	A.	P.
Meteorological Reporter ..	3,600	0	0			
Office establishment ..	2,764	1	10			
Office rent ..	900	0	0			
Observers.. { Telegraph Masters* ..	2,325	0	0			
Native observers ..	3,480	0	0			
Messengers' allowances ..	78	0	0			
Superintendent's allowances ..	1,440	0	0			
				14,587	1	10
<i>Central Office.</i>						
	Rs.	A.	P.	Rs.	A.	P.
Contingent and office furniture ...	571	6	9			
Postage ...	507	9	0			
Telegraphic messages ...	9,646	4	0			
Travelling allowances ...	926	8	0			
				11,651	11	9
<i>Observatories.</i>						
Building and repairs ...	473	6	9			
Contingent ...	83	9	0			
				556	15	9
GRAND TOTAL ...				26,795	13	4

The total is Rs. 2,155 in excess of last year. This is, however, due almost entirely to increase in the nominal charges for telegraphic messages and postage. The weather telegrams for the use of the Calcutta Storm Signal Service were despatched throughout the year as "urgent." This caused the large increment under that head. The increased correspondence and circulation of the Bay of Bengal daily weather reports to Government officials explains the increment under the head "Postage." Building and repairs were well within the budget allowance in consequence mainly of the large expenditure under this head last year.

The statement does not include the cost of instruments supplied to the observatories by the Indian Meteorological Department, nor does it include the cost of stationery supplied to the central office, or of printing the various forms required by the office, nor of printing the meteorological returns published in the Gazette or otherwise.

JOHN ELIOT, M.A., F.M.S.,

METEOROLOGICAL OFFICE, BENGAL,
 The 30th May 1883.

Meteorological Reporter to the
 Government of Bengal.

RETURNS OF JOINT STOCK COMPANIES FOR 1882-83.

No. I.

Statement showing the name and number on the Register borne by each Joint Stock Company registered in the Calcutta Registry Office, with its object, nominal capital, and date of registration, during the year ending 31st March 1883.

Number on this list.	Number borne by each Company on the General Register.	NAME OF EACH COMPANY.	Object of each Company.	Date of Registration.	Nominal capital.	REMARKS.
					Rs.	
1	434	Calcutta Ice Co., Ltd. ...	To manufacture ice ...	5th April 1882	2,00,000	
2	435	T. F. Brown and Co., Ltd. ...	To carry on the business of auctioneers, horse-dealers, and harness-makers, &c.	5th "	7,00,000	
3	436	Sheikh Ahmed and Co., Ltd. ...	To smelt iron ...	11th "	1,00,000	
4	437	Edenbarea Tea Co., Ltd. ...	To cultivate tea ...	25th "	1,20,000	
5	438	Bengal Purveying Co., Ltd. ...	To carry on the business of purveyors.	27th "	5,000	
6	439	Northern Bengal Railway Co-operative Supply Association, Ltd. ...	To supply stores ...	30th May "	6,000	
7	440	Co-operative Pharmacy Co., Ltd. ...	To carry on the business of chemists and druggists.	31st "	50,000	
8	441	Ranoorunge Ice Manufacturing Co., Ltd. ...	To manufacture ice ...	6th July "	50,000	
9	442	Mossai Tea Co., Ltd. ...	To cultivate tea ...	5th "	2,50,000	
10	443	Campdown Pressing Co., Ltd. ...	To press jute, cotton, &c. ...	25th "	5,00,000	
11	444	Titagarh Paper Mills Co., Ltd. ...	To manufacture paper ...	28th "	5,00,000	
12	445	Imperial Ice Co., Ltd. ...	To manufacture ice ...	18th August "	1,00,000	
13	446	Orissa Coasting Steam Navigation Co., Ltd. ...	To navigate and carry cargo from port to port.	24th "	4,00,000	
14	447	Esmaptic Gwallie Tea Co., Ltd. ...	To cultivate tea ...	5th September "	2,20,000	
15	448	Pashok Tea Co., Ltd. ...	To cultivate tea, &c. ...	5th "	2,50,000	
16	449	Gobea Tannery Co., Ltd. ...	To trade in hides and skins ...	9th "	1,00,000	
17	450	Calcutta Tanning Co., Ltd. ...	For tanning hides and skins ...	14th "	2,00,000	
18	451	Hooghly Mills Co., Ltd. ...	To carry on the business of weavers, spinners, &c.	21st "	13,50,000	
19	452	Northern Dooars Tea Co., Ltd. ...	To cultivate tea, &c. ...	26th "	1,25,000	
20	453	Northern Bengal Tea Corporation, Ltd. ...	To cultivate tea ...	26th "	1,00,000	
21	454	Bengal Rice Mills Association, Ltd. ...	Milling and preparing paddy and rice.	17th October "	10,00,000	
22	455	Calcutta Steam Navigation Co., Ltd. ...	To navigate in Bengal ...	8th November "	1,50,000	
23	456	British India Ice Co., Ltd. ...	To manufacture ice ...	15th "	2,00,000	
24	457	Monroo Tea Co., Ltd. ...	To cultivate tea ...	25th "	75,000	
25	458	Gurjang Jhara Tea Co., Ltd. ...	To cultivate tea, &c. ...	2nd December "	50,000	
26	459	Suburguri Tea Co., Ltd. ...	To cultivate tea ...	2nd "	1,00,000	
27	460	Phoolbari Tea Co., Ltd. ...	To cultivate tea ...	20th "	5,12,000	
28	461	Kankuratah Co., Ltd. ...	To carry on the business of weavers and spinners.	30th "	14,00,000	
29	462	Calcutta Trades Association ...	To promote the interests of the trading community of Calcutta.	16th January 1883	.....
30	463	Darjeeling and Kurseong Hotel and Trading Co., Ltd. ...	Hotel-keeping ...	2nd February "	2,50,000	
31	464	Barracote Tea Co., Ltd. ...	To cultivate tea ...	17th "	4,00,000	
32	465	Inland Flotilla Co., Ltd. ...	To navigate on the principal rivers of India and Burmah.	17th "	50,00,000	
33	466	Haintgoore Tea Co. (Dooars), Ltd. ...	To cultivate tea ...	18th "	75,000	
34	467	Chota Nagpur Banking Association, Ltd. ...	To carry on banking business ...	21st "	20,000	
35	468	Nedam Tea Co., Ltd. ...	To cultivate tea ...	1st March "	5,00,000	
36	469	Burial Trading Co., Ltd. ...	To trade in timbers ...	12th "	20,000	
37	470	Bengal Telephone Co., Ltd. ...	To construct telephonic lines ...	14th "	10,00,000	
					1,00,63,000	

No. II.

Statement showing the register number and names of Companies that have increased their capital during the year ending 31st March 1883.

Number on this list.	Register number borne by each Company.	DATE OF ORIGINAL REGISTRATION.	Amount of original capital.	Names of Companies.	Date of Increase.	Amount of increased capital.	REMARKS.
			Rs.			Rs.	
1	393	16th August 1879	3,00,000	Indian Portland Cement Co., Ltd. ...	15th June 1882	4,00,000	
2	371	21st February 1878	1,12,000	Roughlee Roughlet Tea Co., Ltd. ...	16th "	25,000	
3	396	10th April 1879	14,00,000	Darjeeling and Himalayan Railway Co., Ltd. ...	16th "	3,50,000	
4	387	12th "	50,000	Jessore Loan Co., Ltd. ...	17th July "	60,000	
5	401	20th March 1880	250,000	Dacca Loan Office, Ltd. ...	23rd August "	50,000	
6	30	24th July 1868	23,00,000	Bengal Coal Co., Ltd. ...	10th September "	2,00,000	
7	455	8th November 1882	1,50,000	Calcutta Steam Navigation Co., Ltd. ...	3rd January 1883	1,50,000	
8	445	18th September "	1,00,000	Imperial Ice Co., Ltd. ...	20th February "	5,00,000	
9	439	30th May "	6,000	Northern Bengal Railway Co-operative Supply Association, Ltd. ...	20th January "	1,00,000	
10	288	14th July 1874	14,00,000	Howrah Mills Co., Ltd. ...	30th "	2,000	
11	268	23rd September 1873	70,000	Wymenung Loan Office, Ltd. ...	8th February "	3,50,000	
12	114	7th August 1863	2,00,000	Calcutta Landing and Shipping Co., Ltd. ...	20th March "	50,000	
					8th September 1881	2,00,000	
						22,70,000	By an oversight not shown in 1881-82.

No. III.

Statement showing the register number and names of Companies that have commenced winding up, have been finally dissolved, or are otherwise defunct, with their capital, dates of registration, winding up, or final dissolution, during the year ending 31st March 1883.

Number on this list.	Number borne by the Company on the Register.	NAMES OF COMPANIES.	Nominal capital.	Date of registration.	Date of winding up.	Date of final dissolution.	Date on which written off defunct.	REMARKS.
			Rs.					
1	215	Darjeeling Teral Tea Co., Ltd.	1,00,000	25th Oct. 1867	30th May 1880	30th May 1882		
2	402	New Oriental Jute Mills Co., Ltd.	6,63,000	29th May 1880	2nd Aug. "	30th " "		
3	248	Jokai (Assam) Tea Co., Ltd.	3,00,000	15th Nov. 1872	15th June 1882	18th Jan. 1883		
4	325	Rustomjee Twine and Canvas Factory Co., Ltd.	8,00,000	15th Aug. 1875	10th Nov. 1879	20th July 1882		
5	245	Murallish Tea Co., Ltd.	1,10,000	21th Sept. 1872	25th Mar. 1882	5th Jan. 1883		
6	337	Jamshapore Trading Co., Ltd.	50,000	20th June 1876	4th Jan. 1883			
7	318	Dam Dim Tea Co., Ltd.	60,000	15th Jan. 1877	24th " "			
8	376	Nowra Nuddy Tea Co., Ltd.	70,000	20th Dec. 1878	24th " "			
9	388	Sytagool Tea Co., Ltd.	60,000	26th May 1879	24th " "			
10	362	Bogra Trading Co., Ltd.	20,000	27th Dec. 1877	7th Feb. "			
11	406	Western Doonars Tea Co., Ltd.	50,000	22nd Nov. 1880	28th " "			
12	456	British India Ice Co., Ltd.	2,00,000	15th " 1882	17th Mar. "			

No. IV.

Statement showing the register numbers and names of Literary, Scientific, and Charitable Societies registered under Act XXI of 1860 during the year ending 31st March 1883.

Nil.

No. VI.

Statement showing, in order of registration, the numbers and names of Joint Stock Companies on the Register on the 31st March 1883, with their nominal and paid up capital, and their profit or loss as per Balance Sheets received, and date of such Balance Sheets.

Number of this list.	Number of Register borne by each Company.	NAMES OF COMPANIES.	Date of registration.	Nominal capital.	Paid up capital.	PROFIT OR LOSS AS PER LAST BALANCE SHEET FILED.		Date of last Balance Sheet.	REMARKS.
						Profit.	Loss.		
				Rs.	Rs.	Rs.	Rs.		
1	20	Bengal Coal Co., Ltd. ...	24th July 1858	24,00,000	22,00,000	2,73,865	.....	31st Oct. 1882	
2	22	India General Steam Navigation Co., Ltd.	25th Sept. "	33,00,000	33,00,000	5,91,175	.....	31st Dec. "	
3	84	Bengal Uncovenanted Service Medical Hall Association, Ltd.	6th Dec. "	50,000	25,940	6,987	.....	31st " "	
4	30	Bengal Tea Co., Ltd. ...	23rd Nov. 1859	10,00,000	5,48,520	533	.....	31st " "	
5	40	Balaamin Tea Co., Ltd. ...	21st Feb. 1860	2,00,000	2,00,000	601	.....	31st " "	
6	46	Calcutta Docking Co., Ltd. ...	4th Sept. "	12,18,000	12,18,000	85,492	.....	31st " "	
7	63	East India Tea Co., Ltd. ...	7th Aug. 1861	10,00,000	10,00,000	6,400	.....	31st " 1881	
8	67	Kanchanpore Tea Co., Ltd. ...	13th Nov. "	8,00,000	4,56,000	.....	28,583	31st " "	
9	68	Sylhet Tea Co., Ltd. ...	18th Dec. "	1,00,000	1,40,633	6,232	.....	1st Jan. 1883	
10	73	Great Eastern Hotel Wine and General Purveying Co., Ltd. ...	28th Feb. 1862	12,00,000	11,98,600	67,553	.....	28th Feb. 1882	
11	78	Ramghur Co., Ltd. ...	13th May 1862	10,00,000	4,28,000	.....	10,205	31st Dec. "	
12	81	Scom Tea Co., Ltd. ...	20th Nov. "	8,00,000	8,00,000	12,379	.....	31st " "	
13	86	Pankhabaree Tea Co., Ltd. ...	9th Mar. 1863	2,50,000	2,18,342	11,880	.....	31st " "	
14	89	Dehradun Tea Co., Ltd. ...	31st " "	20,00,000	8,78,000	.....	.....	.....
15	90	R. Scott Thomson & Co., Ltd. ...	1st April "	5,00,000	4,07,000	12,508	.....	31st Mar. 1882	
16	100	Central Cachar Tea Co., Ltd. ...	2nd May "	10,00,000	10,00,000	63,143	.....	31st Dec. "	
17	103	Beshuanth Tea Co., Ltd. ...	6th " "	11,00,000	8,35,000	44,164	.....	31st " "	
18	105	Muttuck Tea Co., Ltd. ...	20th " "	4,00,000	3,04,275	.....	1,269	31st " 1881	
19	111	Eastern Cachar Tea Co., Ltd. ...	15th July "	7,00,000	7,00,000	.....	13,000	31st " 1882	
20	112	Equitable Coal Co., Ltd. ...	1st Aug. "	8,00,000	8,00,000	5,635	.....	31st " "	
21	114	Calcutta Landing and Shipping Co., Ltd.	7th " "	5,00,000	4,20,000	18,732	.....	30th April "	
22	120	Howrah Docking Co., Ltd. ...	18th Sept. "	8,00,000	8,00,000	8,817	.....	31st Dec. 1881	
23	124	Jellalpore Cachar Tea Co., Ltd. ...	24th " "	1,00,000	1,00,000	16,365	.....	31st " 1882	
24	124	Gangary Cotton Mills Co., Ltd. ...	9th Oct. "	14,00,000	14,00,000	40,847	.....	31st " "	
25	137	Kuracang and Darjeeling Tea Co., Ltd.	12th Dec. "	8,00,000	6,56,390	.....	708	30th Nov. "	
26	139	Durrung Tea Co., Ltd. ...	4th Jan. 1864	5,00,000	4,63,000	10,631	.....	31st Dec. 1881	
27	140	Monacherra Tea Co., Ltd. ...	30th " "	8,00,000	7,29,750	.....	6,329	31st " 1882	
28	144	Tukvar Co., Ltd. ...	20th Feb. "	12,00,000	7,34,000	.....	.....	31st " "	
29	154	Moran Tea Co., Ltd. ...	20th July "	6,00,000	4,80,000	19,795	.....	31st " 1881	
30	182	Calcutta Central Press Co., Ltd. ...	21st April 1865	75,000	70,700	7,500	.....	30th April 1883	
31	200	Durrachur Co., Ltd. ...	22nd " 1865	60,000	60,000	.....	.....	30th Nov. "	
32	203	Burnah Steam Tug Co., Ltd. ...	12th July "	8,00,000	1,80,000	21,075	.....	30th April "	
33	207	Kuttal Tea Co., Ltd. ...	24th Jan. 1867	1,00,000	1,00,000	16,404	.....	31st Dec. 1881	

Number of this list.	Number of Reg. later borne by each company.	NAMES OF COMPANIES.	Date of registration.	Nominal capital.	Paid up capital.	PROFIT OR LOSS AS PER LAST BALANCE SHEET FILED.		Date of last Balance sheet.	REMARKS.
						Profit.	Loss.		
				Rs.	Rs.	Rs.	Rs.		
24	212	Chandypore Tea Co., Ltd.	8th Aug. 1887	2,50,000	2,50,000	10,400	.....	31st Dec. 1882	
25	213	Nasmyth's Patent Press Co., Ltd.	10th Sept. 1887	3,50,000	3,20,000	19,301	.....	30th June	
26	214	New Mutual Tea Co., Ltd.	15th Aug. 1888	1,30,000	1,17,750	22,433	.....	31st Dec. "	
27	220	Arattupore Tea Co., Ltd.	19th Jan. 1888	3,00,000	3,00,000	10,640	.....	31st "	
28	221	Hong-Kong and Shanghai Banking Corporation, Ltd.	7th April "	1,12,50,000	1,12,50,000	.....	7,04,707.	30th "	* Capital, Loss. \$50,00,000 \$7,04,707-33.
29	224	Nutwampore Tea Co., Ltd.	8th Jan. 1876	4,00,000	4,00,000	45,100	.....	31st "	
30	225	Paradipore Loan Office, Ltd.	13th June "	20,000	18,500	6,000	.....	12th April "	
31	226	Tippurah Loan Office, Ltd.	25th March 1871	1,00,000	84,320	4,107	.....	12th "	
32	227	Callichera Tea Co., Ltd.	30th May "	2,70,000	2,50,000	6,341	.....	31st Dec. 1881	
33	228	Adulphora Tea Co., Ltd.	5th June "	1,10,000	1,10,000	.....	250	31st "	1882
34	233	Shimoli Tea Co., Ltd.	15th Nov. "	6,25,000	6,25,000	25,121	.....	31st "	
35	234	Indian Teral Tea Co., Ltd.	4th Dec. "	1,50,000	1,50,000	5,391	.....	31st "	
36	235	Majumdar Tea Co., Ltd.	27th Jan. 1872	1,75,000	1,75,000	3,874	.....	31st "	
37	237	Hooluagore Tea Co., Ltd.	23rd March "	4,00,000	4,00,000	5,015	.....	31st "	
38	238	Central Teral Tea Co., Ltd.	4th April "	4,00,000	4,00,000	10,429	.....	31st "	
39	242	Dowal and Parbutia Tea Co., Ltd.	18th July "	1,80,000	1,80,000	27,110	.....	31st "	
40	244	Bowrah Cotton Mills Co., Ltd.	7th Aug. "	18,00,000	18,00,000	11,413	.....	31st Aug. "	
41	245	Cocheela Tea Co., Ltd.	17th Jan. 1873	3,00,000	2,48,625	.....	2,325	31st Dec. "	
42	250	Assam East Indian Railway Co-operative Society, Ltd.	13th Feb. "	10,000	10,000	430	.....	31st "	1881
43	251	Holla Tea Co., Ltd.	27th "	3,50,000	3,50,000	.....	9,625	31st "	1882
44	253	Ranegunge Coal Association, Ltd.	8th April "	9,00,000	8,25,000	76,200	.....	31st March "	
45	256	Bedarkosh Tea Co., Ltd.	8th "	1,00,000	95,240	.....	9,817	31st Dec. "	
46	257	Calcutta Hydraulic Press Co., Ltd.	10th "	1,70,000	1,70,000	31,580	.....	31st "	
47	259	Budge Budge Jute Mills Co., Ltd.	21st "	15,00,000	14,41,000	1,81,608	.....	30th April "	
48	260	Gowharly Tea Co., Ltd.	2nd May "	4,00,000	4,00,000	.....	4,913	31st Dec. "	
49	261	Fort Gloster Jute Manufacturing Co., Ltd.	6th "	14,00,000	14,00,000	41,553	.....	31st May "	
50	262	New Borthoom Coal Co., Ltd.	16th "	7,20,000	7,20,000	61,243	.....	31st Oct. "	
51	263	Buxar Co-operative Society, Ltd.	7th "	4,000	4,000	980	.....	31st Dec. "	
52	265	Kam Cherra Tea Co., Ltd.	23rd July "	2,75,000	2,75,000	.....	1,150	31st "	
53	266	Colonial Tea Co., Ltd.	24th "	3,00,000	3,00,000	.....	32,615	31st "	
54	267	Amiable Tea Co., Ltd.	1st Sept. "	3,00,000	3,00,000	51,381	.....	31st "	
55	268	Mymensingh Loan Office, Ltd.	23rd "	1,01,000	50,640	12,332	.....	12th April "	
56	269	Lahor Transport Co., Ltd.	28th Oct. "	1,00,000	41,260	3,570	.....	31st Aug. "	
57	270	Bansal Loan Office, Ltd.	17th Nov. "	20,000	18,000	5,427	.....	12th March "	
58	271	Singbulli and Murmah Tea Co., Ltd.	26th "	4,00,000	3,00,000	20,556	.....	31st Dec. 1881	
59	272	Seobhore Jute Manufacturing Co., Ltd.	1st Dec. "	15,00,000	15,00,000	1,41,920	.....	31st "	1882
60	274	Agricultural Phosphates Co., Ltd.	18th "	1,00,000	85,000	.....	42,038	31st "	1881
61	276	Puttalshree Tea Co., Ltd.	31st "	2,00,000	2,00,000	7,320	.....	31st "	1881
62	277	Spring Side Tea Co., Ltd.	10th Jan. 1874	1,00,000	1,08,000	1,308	.....	31st "	
63	278	New Fullidhi Tea Co., Ltd.	10th Feb. "	2,00,000	2,00,000	12,004	.....	31st "	
64	280	Watson's Patent Press Co., Ltd.	25th "	3,00,000	3,00,000	30,308	.....	31st "	
65	281	Moulala Tea Co., Ltd.	5th March "	1,50,000	1,38,000	1,583	.....	31st "	
66	282	Ramkrishna Press Co., Ltd.	23rd April "	1,30,000	1,30,000	8,040	.....	30th Sept. "	
67	287	Ravalsda Press Co. (Watson's Patent), Ltd.	13th July "	3,00,000	2,70,000	.....	9,811	30th June "	
68	288	Howrah Mills Co., Ltd.	14th "	17,50,000	14,00,000	1,17,270	.....	31st Dec. "	
69	290	Strand Bank Press Co. (Watson's Patent), Ltd.	24th "	2,50,000	2,50,000	50,912	.....	31st Jan. "	
70	291	Teendrasreeh Co., Ltd.	28th "	1,35,000	1,35,000	10,675	.....	31st Dec. "	
71	292	Joonkollor Tea Co., Ltd.	7th Aug. "	80,000	80,000	.....	539	31st "	
72	293	Burkhol Tea Co., Ltd.	1st Sept. "	2,70,000	2,70,000	7,324	.....	31st "	
73	294	Tingling Tea Co., Ltd.	15th "	1,50,000	1,35,300	15,793	.....	31st "	
74	295	Baree Tea Co., Ltd.	29th "	1,00,000	1,50,000	.....	20,440	31st "	
75	296	Asiatic Jute Co., Ltd.	30th "	4,00,000	5,00,000	28,084	.....	31st "	
76	298	Jheeraghat Tea Co., Ltd.	6th Oct. "	2,20,000	2,20,000	.....	16,047	31st "	
77	300	Phoenix Tea Co. of Cachar, Ltd.	9th "	6,35,000	6,35,000	32,111	.....	31st "	
78	301	Borra Loan Office, Ltd.	5th Nov. "	20,000	20,000	2,105	.....	8th April "	
79	302	Sungoo River Tea Co., Ltd.	13th "	2,00,000	2,00,000	4,080	.....	31st Dec. 1881	
80	304	Ohota Nagpore Tea Co., Ltd.	27th "	2,50,000	2,50,000	6,336	.....	31st "	1882
81	306	Lakatorah Tea Co., Ltd.	5th Dec. "	2,25,000	2,25,000	17,755	.....	31st "	
82	307	Dunbar Cotton Mills Co., Ltd.	18th "	20,00,000	13,75,500	14,392	.....	31st "	
83	311	Second Mutual Tea Co., Ltd.	24th Feb. 1875	2,35,300	2,00,000	.....	1,905	31st "	
84	312	Mim Tea Co., Ltd.	9th Mar. "	1,50,000	1,50,000	.....	3,280	31st "	
85	313	Grielle Tea Co., Ltd.	29th "	3,00,000	4,00,000	30,550	.....	31st "	
86	314	Hoolmree Tea Co., Ltd.	26th "	1,20,000	1,20,000	7,390	.....	31st "	
87	316	Rajabara Tea Co., Ltd.	1st May "	88,000	88,000	.....	5,904	31st "	
88	317	Rajabara Tea Co., Ltd.	5th "	2,00,000	2,00,000	.....	2,509	31st "	
89	318	Carey Co., Ltd.	11th June "	16,00,000	16,00,000	1,17,133	.....	31st "	
90	320	Burukar Coal Co., Ltd.	19th "	1,50,000	1,50,000	10,107	.....	31st May "	
91	321	Gr. b. Tea Co., Ltd.	21st "	5,00,000	5,00,000	.....	.....	31st Dec. 1881	
92	322	Sylhet Cultivating Co., Ltd.	20th "	20,000	10,025	292	.....	11th April 1882	
93	323	Borra Tea Co., Ltd.	4th Aug. "	1,50,000	1,22,425	.....	.....	31st Dec. 1881	
94	325	Nasirabad Loan Office, Ltd.	26th Sept. "	20,000	20,000	3,090	.....	12th April 1882	
95	329	Panbaree and Kourkoorah Tea Co., Ltd.	14th Jan. 1876	1,50,000	1,50,000	.....	23,673	31st Dec. "	
96	330	North-Western Cachar Tea Co., Ltd.	23rd "	2,70,000	2,70,000	16,005	.....	31st "	
97	331	Runghee Runghee Tea Co., Ltd.	21st Feb. "	1,40,000	1,40,000	2,042	.....	31st "	
98	333	Jessore Loan Co., Ltd.	12th April "	1,20,000	80,000	3,930	.....	30th April "	
99	334	Gourypore Co., Ltd.	12th "	12,00,000	12,00,000	2,61,742	.....	31st Dec. "	
100	335	Saharsdipore Loan Office, Ltd.	24th June "	20,000	14,740	543	.....	12th April "	
101	339	Rajshahi Stone Co., Ltd.	30th "	2,50,000	2,50,000	8,893	.....	31st Dec. 1881	
102	341	Anilchurn Tea Co., Ltd.	25th July "	3,75,000	3,75,000	39,053	.....	31st "	
103	342	Moonshernaga Loan Office, Ltd.	20th "	20,000	12,010	2,616	.....	11th Feb. 1882	
104	343	Mymensingh Great Eastern Bengal Exchange Co., Ltd.	23rd Aug. "	20,000	2,550	.....	102	30th April "	
105	345	Cachar Native Joint Stock Co., Ltd.	31st "	1,00,000	55,675	19,895	.....	31st Dec. 1881	
106	347	Teesta Valley Tea Co., Ltd.	20th Nov. "	3,50,000	3,20,000	10,610	.....	31st Dec. 1882	
107	349	Delhing Co., Ltd.	5th Jan. 1877	10,00,000	8,03,475	.....	2,504	31st "	
108	350	Souai Tea Co., Ltd.	23rd "	1,00,000	1,00,000	.....	1,091	31st "	1881
109	352	Dhanseri Tea Co., Ltd.	23rd March "	1,00,000	1,00,000	2,108	.....	31st "	
110	353	East Bengal Mercantile Co., Ltd.	10th April "	20,000	1,185	.....	800	10th April "	
111	354	Empress of India Cotton Mills Co., Ltd.	16th "	4,75,000	4,75,000	15,000	.....	31st Dec. 1882	
112	356	Good Hope Tea Co., Ltd.	2nd May "	1,15,000	1,00,000	.....	1,500	31st "	
113	357	Cinnatollah Tea Co., Ltd.	14th "	2,50,000	2,50,000	.....	37,913	31st "	
114	359	Hatewar Tea Co., Ltd.	16th July "	50,000	50,000	4,500	.....	31st "	
115	361	Kamarbhaty Co., Ltd.	24th Sept. "	8,00,000	4,00,000	5,21,686	.....	31st "	
116	363	Seremah Tea Co., Ltd.	2nd Jan. 1878	1,00,000	61,100	.....	.....	31st "	1879
117	364	Singtam Tea Co., Ltd.	10th "	1,50,000	1,50,000	5,900	.....	31st "	1882
118	365	Bahadurpore Tea Co., Ltd.	19th March "	20,000	17,000	.....	.....	31st "	
119	367	Bengal Tea Manufacturing Co., Ltd.	9th July "	3,30,000	3,25,300	17,018	.....	31st "	
120	368	Hindoo Tea Co., Ltd.	12th "	35,000	21,800	.....	.....	31st "	1881

Number of this list.	Number of register borne by each company.	NAMES OF COMPANIES.	Date of registration.	Nominal capital.	Paid up capital.	PROFIT OR LOSS AS PER LAST BALANCE SHEET FILED.		Date of last Balance Sheet.	REMARKS.
						Profit.	Loss.		
				Rs.	Rs.	Rs.	Rs.		
181	373	Loobah Tea Co., Ltd.	27th Sept. 1878	5,00,000	5,00,000	61,108	.....	31st Dec. 1882	
182	374	Railway Hindoo Co-operative Society, Ltd.	13th Nov. "	20,000	5,018	22	.....	31st " 1880	
183	377	Longview Tea Co., Ltd.	16th Jan. 1879	3,44,000	3,44,000	17,219	.....	31st " 1882	
184	378	Darjeeling Tea and Cinchona Association, Ltd.	16th " "	2,00,000	2,00,000	28,815	.....	31st " 1881	
185	379	United Medical Association, Ltd.	7th Feb. "	5,000	2,000	203	.....	28th Feb. 1882	
186	381	Bonval Stone Co., Ltd.	16th " "	80,000	80,000	49,443	.....	31st Dec. "	
187	382	Chitpore Hydraulic Pressing Co., Ltd.	17th March "	4,00,000	4,00,000	.....	.....	31st " 1880	
188	383	Narail Trading Co., Ltd.	26th " "	20,000	0,008	573	.....	31st " 1882	
189	384	Kottela Tea Co., Ltd.	25th " "	1,00,000	1,00,000	20,125	.....	31st " "	
190	385	Murijha Tea Co., Ltd.	16th April "	1,50,000	1,50,000	2,000	.....	31st " "	
191	386	Darjeeling and Himalayan Railway Co., Ltd.	10th " "	17,50,000	13,89,340	77,052	.....	31st " 1881	
192	389	Jamulpore Ice Manufacturing Co., Ltd.	28th May "	10,000	7,120	880	.....	31st " "	
193	390	Jalpaiguri Tea Co., Ltd.	29th " "	50,000	50,000	4,000	.....	31st " 1882	
194	391	Kaukharah Lime Factory Co., Ltd.	6th June "	10,000	0,650	1,447	.....	30th June "	
195	392	Washahara Tea Co., Ltd.	8th Aug. "	1,50,000	1,50,000	8,023	.....	31st Dec. "	
196	393	Indian Portland Cement Co., Ltd.	18th " "	5,50,000	2,00,000	.....	.....	31st " 1881	
197	394	Tonmoo Tea Co., Ltd.	19th Sept. "	64,000	42,000	.....	.....	31st " "	
198	395	Bengal Banking Corporation, Ltd.	4th Feb. 1880	20,00,000	17,155	0,070	.....	31st " 1882	
199	396	Talashpore Tea Association, Ltd.	5th " "	50,000	41,000	860	.....	31st " "	
200	397	Karmath Association, Ltd.	5th " "	6,00,000	4,06,000	27,080	.....	31st " "	
201	398	Naharuli Tea Co., Ltd.	14th " "	1,00,000	95,250	20,512	.....	31st " 1881	
202	399	Hindoo Union Bank, Ltd.	26th Feb. 1880	20,000	1,410	144	.....	31st Dec. 1881	
203	400	Hajjan Tea Association, Ltd.	5th Mar. "	70,000	70,000	7,259	.....	31st " 1882	
204	401	Dacca Loan Office, Ltd.	5th " "	1,00,000	40,790	8,005	.....	12th April "	
205	403	Goswami Jute Mills Co., Ltd.	5th July "	4,00,000	3,02,240	31,080	.....	31st Dec. "	
206	404	Sylhet United Co., Ltd.	23rd Aug. "	20,000	2,051	.....	.....	31st " 1881	
207	405	United Jute Co., Ltd.	8th Oct. "	9,00,000	6,75,000	1,08,010	.....	31st " 1882	
208	407	Tazpore Farming Co., Ltd.	8th Dec. "	20,000	2,520	.....	.....	31st " 1881	
209	408	Assam Mineral Oil Co., Ltd.	14th Jan. 1881	1,00,000	.....	.....	.....	31st " 1882	
210	409	Singmaha Tea Co., Ltd.	20th " "	1,30,000	1,00,000	30,839	.....	31st Dec. "	
211	410	Ringong Tea Co., Ltd.	7th Feb. "	3,00,000	2,00,000	3,227	.....	31st " "	
212	411	Pinkoub Trading Co., Ltd.	7th " "	20,000	2,075	120	.....	12th April "	
213	412	Goswami Tea Co., Ltd.	8th Mar. "	80,000	80,000	7,844	.....	31st Dec. "	
214	413	Singma Tea Co., Ltd.	30th " "	1,50,000	1,17,000	1,854	.....	31st " "	
215	414	Kishong Tea Co., Ltd.	12th April "	3,25,000	3,25,000	21,210	.....	31st " "	
216	415	Bengal Silk Co., Ltd.	20th June "	3,50,000	3,50,000	14,179	.....	31st Oct. "	
217	416	Commercial Co., Ltd.	18th July "	30,000	6,840	80	.....	12th April "	
218	417	Chengia Tea Co., Ltd.	27th " "	1,50,000	1,50,000	904	.....	31st Dec. "	
219	418	Sylhet Loan Co., Ltd.	1st Aug. "	20,000	3,310	352	.....	15th July "	
220	420	India Press Co., Ltd.	14th Oct. "	2,00,000	1,40,000	20,102	.....	31st Jan. 1883	
221	421	Indian Kerosine Oil Co., Ltd.	9th Nov. "	10,00,000	.....	.....	.....	30th Nov. 1882	
222	422	Tazpore Sugar Works Co., Ltd.	9th " "	2,00,000	2,00,000	32,400	.....	31st Dec. "	
223	423	New Open House Co., Ltd.	30th Jan. 1882	15,000	12,000	350	.....	31st Dec. "	
224	424	Jatiga Valley Tea Co., Ltd.	30th " "	1,00,000	1,00,000	8,800	.....	31st " "	
225	425	Deoghur Railway Co., Ltd.	30th " "	2,75,000	.....	.....	.....	31st " "	
226	426	W. Newman and Co., Ltd.	11th Feb. "	3,50,000	3,21,000	89,077	.....	30th June "	
227	427	Rungamattess Tea Co., Ltd.	15th " "	3,70,000	.....	.....	.....	31st Dec. "	
228	428	Lower Darjeeling Tea Co., Ltd.	24th " "	1,10,000	1,10,000	2,052	.....	31st Dec. "	
229	429	Ahore Coal Co., Ltd.	3rd Mar. "	1,50,000	1,25,180	1,141	.....	30th Nov. "	
230	430	Honkly River and Coasting Steam Navigation Co., Ltd.	7th " "	2,20,000	.....	.....	.....	31st " "	
231	431	Bainthara Tea Co., Ltd.	11th " "	1,60,000	.....	.....	.....	31st Dec. "	
232	432	Tinari Tea Co., Ltd.	21st " "	5,00,000	5,00,000	38,335	.....	31st Dec. "	
233	433	Jinglam Tea Co., Ltd.	22nd " "	1,60,000	1,60,000	10,989	.....	31st " "	
234	434	Calcutta Ice Co., Ltd.	5th April "	2,00,000	.....	.....	.....	31st " "	
235	435	T. P. Brown and Co., Ltd.	5th " "	7,00,000	.....	.....	.....	31st Dec. 1882	
236	436	Shahid Ahmed and Co., Ltd.	11th " "	1,00,000	.....	.....	.....	31st Dec. 1882	
237	437	Ellabara Tea Co., Ltd.	25th " "	1,20,000	1,20,000	6,000	.....	31st Dec. 1882	
238	438	Bengal Purveying Co., Ltd.	27th " "	50,000	.....	.....	.....	31st Dec. 1882	
239	439	Northern Bengal Railway Co-operative Supply Association, Ltd.	30th May "	8,000	6,410	1,300	.....	31st Dec. 1882	
240	440	Co-operative Pharmacy Co., Ltd.	31st " "	50,000	.....	.....	.....	31st Dec. 1882	
241	441	Bamangunge Ice Manufacturing Co., Ltd.	5th July "	40,000	20,000	659	.....	31st Dec. 1882	
242	442	Mosai Tea Co., Ltd.	5th " "	2,50,000	.....	.....	.....	30th Nov. 1882	
243	443	Camperdown Pressing Co., Ltd.	25th " "	5,00,000	4,30,000	24,250	.....	30th Nov. 1882	
244	444	Tinagar Paper Mills Co., Ltd.	29th " "	5,00,000	.....	.....	.....	31st Dec. 1882	
245	445	Imperial Ice Co., Ltd.	18th Aug. "	2,00,000	.....	.....	.....	31st Dec. 1882	
246	446	Oriental Coasting Steam Navigation Co., Ltd.	24th " "	4,00,000	.....	.....	.....	31st Dec. 1882	
247	447	Kamptie Gwallie Tea Co., Ltd.	5th Sept. "	2,20,000	.....	.....	.....	31st Dec. 1882	
248	448	Pashok Tea Co., Ltd.	5th " "	2,50,000	.....	.....	.....	31st Dec. 1882	
249	449	Gobra Tannery Co., Ltd.	5th " "	1,50,000	1,42,500	24,103	.....	31st Dec. 1882	
250	450	Calcutta Tanning Co., Ltd.	14th " "	2,00,000	.....	.....	.....	31st Dec. 1882	
251	451	Deoghur Mills Co., Ltd.	21st " "	13,50,000	.....	.....	.....	31st Dec. 1882	
252	452	Northern Buxar Tea Co., Ltd.	20th " "	1,25,000	.....	.....	.....	31st Dec. 1882	
253	453	Northern Bengal Tea Corporation, Ltd.	28th " "	1,00,000	4,577	.....	.....	31st Dec. 1882	
254	454	Bonval Rice Mills Association, Ltd.	17th Oct. "	10,00,000	.....	.....	.....	31st Dec. 1882	
255	455	Calcutta Steam Navigation Co., Ltd.	8th Nov. "	5,00,000	.....	.....	.....	31st Dec. 1882	
256	457	Glencoe Tea Co., Ltd.	20th " "	75,000	.....	.....	.....	31st Dec. 1882	
257	458	Gurjang Jhora Tea Co., Ltd.	2nd Dec. "	50,000	10,100	.....	.....	31st Dec. 1882	
258	459	Salticuri Tea Co., Ltd.	2nd " "	1,00,000	.....	.....	.....	31st Dec. 1882	
259	460	Phosbarua Tea Co., Ltd.	20th " "	5,12,000	.....	.....	.....	31st Dec. 1882	
260	461	Kankharah Co., Ltd.	30th " "	14,00,000	.....	.....	.....	31st Dec. 1882	
261	463	Darjeeling and Kurseong Hotel and Trading Co., Ltd.	2nd Feb. 1883	2,50,000	.....	.....	.....	31st Dec. 1882	
262	464	Thurscot Tea Co., Ltd.	17th " "	4,00,000	.....	.....	.....	31st Dec. 1882	
263	465	Indian Flotilla Co., Ltd.	17th " "	50,00,000	.....	.....	.....	31st Dec. 1882	
264	466	Bamangunge Tea Co. (Debars), Ltd.	19th " "	75,000	.....	.....	.....	31st Dec. 1882	
265	467	Chota Nampur Banking Association, Ltd.	21st " "	20,000	.....	.....	.....	31st Dec. 1882	
266	468	Nedden Tea Co., Ltd.	1st March "	3,60,000	.....	.....	.....	31st Dec. 1882	
267	469	Barnet Trading Co., Ltd.	12th " "	20,000	.....	.....	.....	31st Dec. 1882	
268	470	Bengal Telephone Co., Ltd.	14th " "	10,00,000	.....	.....	.....	31st Dec. 1882	
Total				10,23,23,500	7,42,94,268	.....	.....	.....

P. GHOSH,

Registrar of Joint Stock Companies.

1st May 1883.

Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the Crops in the different Districts of Bengal, as reported to Government during the week ending the 14th July 1883.

No.	District, and date of return.	Rainfall at Sudder Station in inches.	Character of the weather, state and prospects of the crops, and state of health at date.
BENGAL.			
BURDWAN DIV.	Western Districts.		
	1 Burdwan, July 14 '83	0.91	Light showers at intervals; weather generally fine. Want of rain has retarded agricultural operations seriously. Transplanting is almost at a stand-still. Prospects unfavourable.
	Culina	0.72	
	Cutwa	0.34	
	Ransegunge	0.95	
	2 Bankura, " 14 "	0.43	Weather—hot and cloudy with gales. The rainfall of the week was insufficient for the rice crop. <i>Til</i> and <i>boro</i> paddy being reaped. <i>Kang, kheri, koda</i> and other hilly crops of the Sonthals are being sown. Prospects continue favourable. Public health good.
	Bishupore	0.33	
	Maliara	0.82	
	Khatra	1.28	
	3 Beerbhoom, " 14 "	2.03	Weather—sultry. Transplanting of <i>aus</i> and <i>amun</i> crops going on. Prospects satisfactory. A few cases of cholera in south of district.
Rampore Haut	1.32		
4 Midnapore, " 14 "	0.61	Weather—cloudy with slight showers. Prospects of crops good, but more rain is wanted. Public health good.	
Hooghly, " 14 "	0.61		
Howrah, July 14 "	1.38	Weather—sultry till night of 11th, since which cloudy and showery. <i>Jute, aus</i> rice and sugarcane growing fast. <i>Amun</i> rice showing above ground.	
Oolooberia	0.83		
PRESIDENT DIV.	Central Districts.		
	6 24-Pargunnah, July 16 '83	1.82*	Weather—clear and hot in the beginning of the week, and cloudy and rainy in the latter part. Early crops doing well. Transplanting of <i>amun</i> paddy going on. Prospects good. Public health good.
	7 Nodda, " 14 "	.....
	Kooshtea	1.99	Weather—cool and cloudy with occasional rain. Crops doing fairly well. Mortality from fever somewhat increased.
	Meherpore	0.36	
	Chooadanga	0.63	
	Ranaghat	0.52	
	8 Khoolua, " 14 "	0.77	Weather—cloudy and rainy. Transplanting of <i>amun</i> continues. Prospects good. Public health continues good.
	9 Jessore, " 14 "	0.72	
	Jhenida	1.02	Weather—hot and cloudy with occasional slight rain. Want of rain is likely to injure the rice crop. More rain is urgently wanted. General health good.
Magura	0.37		
Narail	2.25		
Bongong	0.90		
10 Muorshedabad, " 14 "	0.48	Weather—hot and close, with occasional light showers. More rain much wanted for transplanting operations. Prospects of <i>dhadoi</i> favourable. Public health generally good.	
11 Dinagopore, July 13 '83	0.26		
RAJSHAHY AND COOCH BEHAR DIV.	12 Rajshahy, " 14 "	0.58	Weather—hot and dry. Rain much wanted. <i>Bhadoi</i> is suffering, and transplanting of <i>amun</i> is being delayed. Rice selling at from 16 to 28 seers per rupee.
	Nattore	0.10	
	Nowgong	Nil	Weather—overcast, and strong east wind at times. Rain very much wanted for both <i>aus</i> and <i>amun</i> crops.
	13 Runagore, " 13 "	0.80	
	Gaibanda	1.54	
	Kurigram	0.95	
	14 Nilphamari	Nil	Weather—hot. Prospects of standing crops fair. Transplanting of <i>amun</i> going on. Rain is urgently required. Cholera still somewhat prevalent.
	14 Bogra, " 14 "	3.81	
	Weather—most part of the week dry, and heat oppressive, but good rain in the latter end. Transplanting of <i>amun</i> continues. <i>Til, kaon</i> and <i>jute</i> are ready for reaping. General health good, except some cases of fever reported from the police station of Bogra and outpost Dhunat.		
	15 Pubna, " 14 "	2.10	
Weather—cloudy with slight showers. Prospects of crops good. <i>Aus</i> paddy being gathered and first instalment of <i>jute</i> in the market. More rain wanted. Rivers falling considerably. Public health good.		Weather—brighter than usual for the season in the hills. All crops doing well. Cholera still hanging about.	
16 Darjeeling, " 14 "	1.93		
Weather—abnormal and unhealthy; unusual breaks. Prospects of crops pretty fair. More steady rain is wanted. Both early and late rice are suffering in some parts of the district for want of steady rain. Cholera still lingers in town of Julpigoree and district.			
17 Julpigoree, " 14 "	1.36		
Weather—very hot and close. Early rice being cut. Prospects of <i>jute</i> fair. Rain wanted for late rice. Cholera abating.		Weather—very hot and close. Early rice being cut. Prospects of <i>jute</i> fair. Rain wanted for late rice. Cholera abating.	
Cooch Behar, " 14 "	0.42		
up to 11th.	0.58		
Dinhatia	0.76		
Dacca Div.	Mathabhangha	0.76	Weather—hot and sometimes cloudy. <i>Roachia</i> and <i>sail</i> paddy and <i>kalai</i> and <i>moog</i> are being sown. <i>Aus</i> paddy and <i>jute</i> are being cut. Sugarcane and <i>amun</i> promising. A large quantity of <i>jute</i> in the Nawabgunge station has been destroyed by worms. Prospects of <i>aus</i> paddy in that station is improving, the waters having fallen.
	up to 7th.	0.76	
	Meckligunge	Nil	
	up to 7th.	Nil	
	18 Dacca, July 14 '83	1.53	Weather—very hot, generally gloomy and showery, but the real rains still hold off. State and prospects of crops still fair, but the need of rain is becoming rather urgent. There is some small-pox in thana Palong, and a good deal of fever about Furzedpore and elsewhere. In Goalundo public health generally good.
	Manickgunge	0.17	
	Munshigunge	0.34	
	Narangunge	0.62	
	19 Furzedpore, " 14 "	0.77	Weather—high wind during the first three days of the week, and sultry afterwards. Crops doing well. General health good.
	Goalundo	0.54	
Madaripore	1.67		
20 Backergunge, " 12 "	0.90		
Weather—very oppressively warm owing to absence of rain; rivers also have sunk rapidly in consequence. <i>Aus</i> and <i>jute</i> have suffered from want of rain in the north-east of the district; elsewhere crops said to promise fairly. <i>Amun</i> being transplanted. General health fair.		Weather—very oppressively warm owing to absence of rain; rivers also have sunk rapidly in consequence. <i>Aus</i> and <i>jute</i> have suffered from want of rain in the north-east of the district; elsewhere crops said to promise fairly. <i>Amun</i> being transplanted. General health fair.	
21 Mymensingh, " 13 "	1.62		
Jamalsore	0.53		
Kishoregunge	0.78		
Atta	0.56		
Netrokona	3.30		

No.	District, and date of return.	Rainfall at Budder Station in inches.	Character of the weather, state and prospects of the crops, and state of health at date.
BENGAL—conold.			
Eastern Districts.—conold.			
CHITTAGONG DIV.	23 Chittagong July 17 '83	2.12	Weather—hot with occasional rain. Transplanting of <i>aus</i> almost over. Sowing of <i>amun</i> continues. Prospects fair. Prices steady. Cholera and cattle-disease still reported.
	24 Noakholly, „ 12 „	2.82	Weather—changeable:—often cloudy; at times clear and sultry; strong southerly wind sometimes prevailing. State and prospects of <i>aus</i> paddy fair. Transplanting of <i>amun</i> paddy in progress to some extent.
	24 Tipperah, „ 12 „	0.51	Weather—unusually hot and occasionally showery. Prospects of crops generally good. Public health generally good.
	25 Chittagong Hill „ 10 „	0.71	Weather—very close and warm; occasional light showers. <i>Jaloom</i> paddy doing well. Cotton crop short. Land being ploughed for rice.
	25 Chittagong Hill „ 11 „	0.28	Weather—hot and occasionally rainy. <i>Amun</i> paddy is being transplanted. <i>Twi</i> being reaped and <i>moog</i> being sown. Prospects of sugarcane fair. Public health good.
BEHAR.			
PATNA DIV.	26 Patna July 14 „	0.57	Weather—hot. Sowing of <i>bhadoi</i> and paddy crops continues. <i>Rakar</i> , maize, and other crops germinating well. A few cases of cholera and small-pox reported from Behar sub-division.
	27 Gya „ 14 „	0.08	Weather—extremely sultry. Want of rain beginning to be severely felt in some parts of the district. Generally, however, agricultural prospects good. Cholera is still very prevalent.
	28 Shahabad, „ 14 „	Nil	Weather—too hot for the season. Break in the rains unfavourable to agricultural prospects. Prospect of rain today (14th). Out-turn of <i>cheena</i> estimated at 6 annas, and of <i>boro</i> paddy at 14 annas.
	29 Buxar „ 14 „	1.47	Weather—high wind, with clouds, showers and sunshine; variable, excessively hot up to 12th. Accounts vary. Rain badly wanted in some places; in others all accounts good. Sudden flooding of low lands has done much harm. Health good. Prices rising slightly or stationary.
	29 Durbhunga, „ 14 „	0.10	A break in the rains lasted from the commencement of the week until the 12th, with strong sun and but little cloud. <i>Bhadoi</i> sowings almost completed. Sowing and transplanting of <i>aghani</i> in progress. Absence of rain has retarded operations.
BHAGALPORE DIV.	30 Mozufferpore, „ 14 „	0.34	Weather—close and sultry. Heavy rain at the time of report. Prospects good. Weeding going on briskly. <i>Makai</i> in progress. Rain much wanted. Sporadic cases of cholera and small-pox still reported.
	30 Hajepore „ 14 „	0.54	Weather—hot and cloudy with east wind. Prospects of crops continue favourable. Agricultural operations in rapid progress. General health fair.
	30 Sestamurhee „ 14 „	1.34	Weather—stagnant and cloudy at intervals. A break in the rains. Transplanting of winter rice retarded for want of rain. State and prospects of <i>bhadoi</i> crops still very good. Public health generally good.
	31 Saran, „ 14 „	Nil	Weather—very hot. <i>Murwa</i> and <i>aghani</i> paddy being transplanted in the north. <i>Bhadoi</i> crops promise well. More rain much wanted everywhere. Public health good.
	31 Sewan „ 14 „	1.46	Weather—very hot till to-day (14th). State and prospects of crops very good; but rain is rather wanted. Health fair. Fever bad in places.
CHHISA DIV.	32 Gopalgunge „ 14 „	0.90	Weather—sultry; scanty rainfall; moderate easterly wind prevailing. Insufficiency of rain is materially affecting the standing crops. Prices of food-grains rising. Public health generally good.
	32 Champaran „ 14 „	Nil	Report not received.
	33 Monghyr, July 14 '83	0.28	
	34 Bhagalpore, „ 14 „	0.15	
	35 Parneah, „ 14 „	Nil	
ORISSA.			
CHHISA DIV.	36 Cuttack, July 13 '83	5.07	Weather—seasonable. <i>Beali</i> being weeded. In some places <i>sarad</i> being re-ploughed. Rice crops on low land in some parts of Jajpur and Kendrapara subdivisions reported to have suffered slightly from floods during last week. Sugarcane, turmeric and <i>arkar</i> growing well. Common rice selling at from 20 to 24 seers per rupee. Public health generally good.
	37 Pooree, „ 13 „	6.34	Weather—rainy. Much damage done to paddy crop in pergunnahs Rahang, Chabbiskud and Rameswar by recent flood. Rivers falling. Miscellaneous crops doing well. Several cases of cholera among pilgrims; otherwise public health good.
	38 Khoorda „ 13 „	7.11	
CHOTA NAGPORE.	40 Balasore, „ 13 „	3.94	Weather—somewhat hot with occasional rain. Ploughing and transplanting going on. Standing crops doing well. A few cases of cholera reported in the Bhadrack sub-division. Public health otherwise good.
	41 South-West Frontier Agency, July 13 '83	2.43	Weather—warm and cloudy. Sowing of <i>bhadoi</i> and early rice still continues. General prospects good. Health good.
	42 Lohardugga, „ 14 „	3.88	Weather—showery. Prospects of crops satisfactory. A good deal of sunshine has done much good during the week. Epidemic cholera has broken out in Husanabad. Prices steady.
	43 Palamow „ 14 „	4.45	Weather—hot and close; bright unclouded skies, and no rain during the greater part of the week. Everything progressing favourably. Prospects promising. General health fairly good.
	44 Singhbhum, „ 13 „	3.61	Weather—rainy and stormy. More or less rain general throughout the district. Paddy, Indian-corn, and <i>biri</i> , <i>moog</i> , and other pulses on the ground doing well. Public health very good.
CHOTA NAGPORE.	44 Manbhum, „ 14 „	1.25	
	44 Govindpore „ 14 „	0.63	

Published for general information.

CALCUTTA, STATISTICAL DEPT.,
The 17th July 1883.COLMAN MACAULAY,
Secy. to the Govt. of Bengal.

IMPORTS INTO CALCUTTA.

The Sea-borne Trade of Calcutta in these Staples during the month of April 1883 was as follows:—

[illegible]

* One maund of paddy is equivalent to 25 seers of rice.
† Exclusive of bags obtained by local manufacture.

The following Statement shows the several Routes followed by the Trade in the Principal Staples of Traffic imported into Calcutta during the month of April 1883.

IMPORTS INTO CALCUTTA.

SPECIFICATION OF ROUTES.	FOOD-GRAINS.					FIBROUS PRODUCTS.		OILSEEDS.		Tea, Indian.	Cotton, raw.	Silk, raw.	SUGAR.	
	Rice.	Paddy.	Wheat.	Gram and pulses.	Other food-grains.	Jute, raw.	Gunny-bags.	Linseed.	Mustard-seed.				Refined.	Unrefined.
	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	No.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
By country boats ...	7,76,088	1,18,718	68,002	1,01,875	2,831	2,07,548	1,273,791	44,870	15,371	...	2,480	615	13,878	45,000
" river steamers ...	4	...	...	...	...	2,20,558	...	30	4,000	776	240	60	...	...
" rail { East Indian ...	64,878	...	7,84,530	1,18,516	23,832	...	...	3,52,083	6,25,162	478	69,523	310	15,387	2,000
" rail { Eastern Bengal ...	20,970	...	34,097	19,531	1,159	3,33,948	903,760	80,912	21,278	712	4,050	479	319	72,333
" road ...	1,21,410	0,264	6,414	7,947	...	32,842	79,372	8,200	...	...	1804	...	80,315	19,020
" sea ...	06,688	6,123	...	4,030	...	441	1,200	...	...	...	18,004	...	397	...
Grand Total of Imports { 1883 ...	10,84,994	1,36,125	8,92,043	2,61,019	27,616	8,00,000	2,257,013	4,34,600	6,60,450	1,961	95,758	1,331	60,130	1,36,467
In April { 1883 ...	11,98,803	1,82,183	4,66,390	2,58,406	26,100	5,59,537	2,025,007	2,93,183	3,94,735	2,073	88,883	1,031	60,390	1,02,337

The following Statement shows the Values, Quantities, and Numbers of the Principal Staples of Traffic exported inland from Calcutta during the month of April 1883.

EXPORTS FROM CALCUTTA.

Whither exported.	Cotton piece-goods.		Cotton twist.		Salt.	Gunny-bags.	Whither exported.	Cotton piece-goods.		Cotton twist.		Salt.	Gunny-bags.
	European.	Indian.	European.	Indian.				European.	Indian.	European.	Indian.		
BERGAL.	Rs.	Rs.	Mds.	Mds.	Mds.	No.	CHOTA NAGPORE.	Rs.	Rs.	Mds.	Mds.	Mds.	No.
Bardwan ...	2,68,676	720	453	700	28,381	57,180	Hazaribagh ...	70,725	...	8	60	3,470	4,445
Beerbhoom ...	1,07,250	3,100	98	213	11,100	15,750	Manbhum ...	35,625	...	11	800	3,414	800
Midnapore ...	1,16,725	...	556	...	1,405	8,085	Total of Chota Nagpore ...	1,12,350	...	19	372	7,228	5,040
Hugli ...	1,26,000	0,625	430	24	3,700	40,704	Grand total of supplies into the provinces under the Lieutenant-Governor of Bengal.	80,93,700	60,148	10,370	2,030	3,80,534	1,145,580
Malergunnahs ...	2,08,380	20,303	834	58	0,023	20,020	OTHER PROVINCES.						
Kudra ...	4,01,300	...	1,133	...	16,224	45,580	Assam ...	3,80,057	...	671	...	17,310	...
Khulna ...	7,000	...	...	...	3,500	...	North-Western Provinces and Oudh ...	34,70,000	6,840	2,657	207	15,008	1,077,615
Jessore ...	75,712	...	100	...	6,428	840	Punjab ...	21,83,028	100	2,175	...	2	202,005
Mooredahabad ...	1,13,175	1,260	7	6	7,000	7,010	Central Provinces ...	88,478	720	524	...	...	8,145
Dumra ...	1,50,180	...	140	...	10,775	1,850	Rajputana States ...	51,000	...	...	...	...	2,804,375
Rajahmundry ...	1,16,400	...	122	...	9,402	1,470	Bombay ...	7,300	450	...	...	...	388,780
Rangpur ...	2,18,602	...	191	...	3,000	3,500	Pondicherry ...	24,071	1,345	1,543	310	...	1,170,000
Bogra ...	1,15,620	...	80	...	36,175	180	British Burmah ...	2,02,368	500	567	2,750	...	4,037,521
Palna ...	1,79,264	...	24	...	1,351	...	Other places ...	18,123	755	82	674	...	...
Dumra ...	75,300	...	27	...	8,978	930	Grand total of { 1883 ...	1,54,96,880	77,748	18,872	6,585	4,18,030	11,257,827
Jalpigore ...	85,520	...	671	...	15,730	4,600	Exports in April { 1883 ...	1,37,20,778	67,423	18,384	5,073	5,63,047	10,138,422
Dacca ...	4,17,288	...	649	...	15,910	500	The Sea-borne Trade of Calcutta in these Staples during the month of April 1883 was as follows:—						
Furzedpore ...	2,01,730	5,780	...	...	21,725	...	IMPORTED INTO CALCUTTA—	Rs.*	Rs.	Mds.	Mds.	Mds.	No.
Backergunge ...	76,321	...	56	...	426	3,000	From Foreign Ports—						
Nymensingh ...	305	...	242	...	3,375	...	United Kingdom ...	1,13,23,737	...	20,083	...	3,73,888	...
Chittagong ...	1,32,005	30	...	...	...	...	Other Foreign ports ...	21,402	...	133	...	26,308	...
Noakhali ...	6,300	...	...	...	...	...	Total of Foreign trade ...	1,13,45,139	...	20,238	...	3,00,081	...
Total of Bengal...	33,31,005	46,773	6,042	1,100	2,49,207	218,241	From Indian Ports—						
BEHAR.							Bombay ...	15,208	50,200	...	4,077	43,210	...
Patna ...	14,45,025	2,100	45	14	48,300	221,805	Madras ...	18,030	1,000	...	...	1,000	...
Gya ...	4,16,350	100	30	70	4,040	20,505	Other ports in Madras ...	1,000	...	...	...	...	...
Shahabad ...	4,80,000	4,100	10	127	11,158	119,000	British Burmah ...	1,200	...	...	6	...	...
Muzaffarpore ...	2,87,325	...	...	...	3,688	6,800	Other Indian ports ...	230	...	...	...	2,412	200
Durgham ...	2,07,175	...	51	342	9,271	21,175	Total of Interport trade ...	20,874	51,200	6	4,081	46,038	1,200
Champur ...	3,44,175	100	80	...	1,043	8,470	Grand Total of { 1883 ...	1,13,75,073	61,200	20,245	4,083	4,45,119	1,200
Monkhyr ...	3,76,750	1,440	110	82	9,525	80,610	Imports in April { 1883 ...	81,54,343	48,407	11,708	2,300	5,00,203	307
Bhagalpur ...	3,01,950	600	14	90	11,033	85,000							
Purneah ...	3,50,000	4,500	37	85	4,275	1,925							
Maldah ...	...	...	...	...	6,550	...							
Montal Pergunnahs ...	3,61,675	6,150	35	152	20,546	100,240							
Total of Behar...	51,48,225	17,370	404	880	1,31,074	685,330							
ORISSA.													
Cuttack ...	...	...	207	...	...	12,500							
Pooree ...	...	...	...	...	...	19,100							
Balasore ...	91,240	...	3,008	204	...	20,073							
Total of Orissa ...	91,240	...	3,505	204	...	237,273							

The following Statement shows the several Routes followed by the Trade in the Principal Staples of Traffic exported from Calcutta during the month of April 1883.

SPECIFICATION OF ROUTES.	COTTON PIECE-GOODS.		COTTON TWIST.		Salt.	Gunny-bags.
	European.	Indian.	European.	Indian.		
	Rs.	Rs.	Mds.	Mds.	Mds.	No.
By country boats ...	2,31,863	10,946	1,244	...	1,64,785	81,141
" river steamers ...	5,33,122	...	1,324	...	8,000	...
" rail { East Indian ...	1,20,95,625	82,860	6,528	2,581	1,74,708	2,181,235
" rail { Eastern Bengal ...	19,81,120	5,700	2,835	...	65,342	20,040
" road ...	2,03,012	16,753	1,232	58	5,074	...
" sea ...	4,00,187	2,180	8,711	3,940	...	8,038,200
Grand Total of Exports in April { 1883 ...	1,54,01,980	77,748	18,872	6,585	4,18,030	11,257,827
In April { 1883 ...	1,37,20,778	67,423	18,384	5,073	5,63,047	10,138,422

* As per tariff declaration value.

STATISTICAL DEPARTMENT,
The 14th July 1883.

COLMAN MACAULAY,
Secy. to the Govt. of Bengal.

Meteorological Report of the Province of

METEOROLOGICAL DIVISION.			STATION OBSERVATIONS.															
DISTRICT.	Representative stations.	AIR PRESSURE.					TEMPERATURE.					HUMIDITY.		CLOUD.		Rainfall.		
		Highest, 10 A.M., barometer reading of month.	Lowest, 10 A.M., barometer reading of month.	Mean, 10 A.M., for month.	Mean reduced to sea-level.	Variation from normal mean.	Highest of month.	Lowest of month.	Mean daily maximum temperature.	Mean daily minimum temperature.	Mean daily temperature.	Variation from normal mean.	Mean, 10 A.M., humidity.	Variation from normal mean.	Mean cloud amount, 10 A.M.		Variation from normal mean, 10 A.M.	
ORISSA.	Pooree	Gopalpore	29.777	29.484	29.575	29.625	...	87.6	70.8	84.3	81.0	83.6	...	83	...	5.8	...	14.7
		False Point	790	413	597	618	-0.16	102.0	70.8	88.9	78.1	83.5	-2.9	79	+7	7.4	+0.5	22.68
	Cuttack	Cuttack	733	303	531	602	-0.19	104.4	75.3	83.6	78.4	86.0	-2.3	73	+4	7.4	-0.2	19.77
	Balasore	Balasore	751	296	530	590	...	96.4	72.8	91.1	77.6	84.4	...	76	...	5.0	...	6.6
SOUTH-WEST BENGAL.	South-West Midnapore and South 24-Pergunnahs.	Saugor Island	786	146	566	594	-0.35	96.2	74.0	80.8	80.5	85.2	-0.7	78	-6	6.6	-0.8	13.24
	Midnapore	Midnapore	672	230	459	...	...	105.5	73.0	84.3	77.6	86.9	...	71	...	5.7	...	6.81
	24-Pergunnahs, Howrah, and Hooghly.	Calcutta	773	301	567	584	-0.26	99.0	73.2	81.3	77.7	84.5	-0.5	77	-5	6.0	-0.4	9.90
	Burdwan	Burdwan	658	325	492	561	-0.19	102.7	73.4	83.4	78.8	86.2	-0.2	73	-6	7.4	-0.8	12.08
	West Burdwan, Bankura, and Beerbhoom.	Raniganj	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Moonsbadabad	Berhampore	710	422	566	600	-0.09	102.2	74.3	81.6	77.1	85.0	-1.5	80	+1	6.6	+0.6	8.46
	Nuddea	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Jessore and Khoolna	Jessore	750	412	579	611	-0.19	100.2	74.1	82.2	78.7	85.4	+0.4	79	-3	5.6	-0.1	6.90
	Chittagong	Chittagong	783	461	598	688	-0.10	102.7	73.0	80.6	76.1	81.3	-0.8	84	-1	7.2	-1.1	34.23
	Chittagong Hill Tracts	Demagiri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
EAST BENGAL.	Backergunj	Barisal	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Noakholly	Noakholly	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Furreedpore	Furreedpore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dacca	Dacca	771	461	593	639	-0.16	101.7	75.1	80.3	78.4	83.6	-0.2	83	-2	7.9	-1.0	9.12
	Commillah	Commillah	809	507	632	658	...	80.1	74.8	79.7	77.0	77.1	...	85	...	6.9	...	19.96
	Mymensingh	Mymensingh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Boysa and Pubna	Serajgunj	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rajshahye	Rampore Beaulah.	715	402	521	599	...	102.6	75.1	83.6	77.8	85.6	...	78	...	4.5	...	7.60
NORTH BENGAL.	Dinagopore	Dinagopore	637	395	495	...	...	96.1	75.1	80.2	77.5	83.9	...	60	...	5.6	...	12.31
	Rungpore	Rungpore	697	413	536	...	...	95.6	72.6	80.9	76.8	83.2	...	81	...	6.4	...	19.94
	Julpigoree and Cooch Behar.	Julpigoree	400	202	303	...	...	96.8	75.1	80.6	76.2	82.4	...	81	...	7.1	...	35.63
	Darjeeling Hill Tracts...	Darjeeling	23.005	22.633	22.866	...	...	70.6	...	65.7	...	...	...	83	...	9.0	...	39.11
	Purneah and North Bhagulpore.	Purneah	29.611	29.300	29.452	573	-0.34	105.2	73.4	80.7	75.2	82.6	+0.8	78	-4	7.2	+0.2	9.07
NORTH BENGAL.	Morufferpore and Durbhunga.	Durbhunga	599	276	433	599	+0.12	103.4	72.6	80.2	78.7	85.2	-0.4	78	-5	5.8	+0.6	10.07
	Chumparum	Motihari	...	...	...	...	...	99.5	...	80.6	...	...	...	73	...	1.2	...	3.05
	Sarun	Chupra	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Shahabad	Dehree	23.337	123	214	564	...	109.0	64.0	99.1	73.7	85.9	...	61	...	5.4	...	8.39
SOUTH BENGAL.		Buzar	466	206	343	...	...	106.6	72.3	85.7	80.9	87.8	...	65	...	4.4	...	5.34
	Gya	Gya	372	28.970	185	555	-0.31	109.2	68.3	96.6	73.7	85.8	-2.9	64	-1	6.2	-3.1	14.67
	Paina	Bankipore	560	29.230	399	560	-0.02	109.6	73.2	96.8	79.9	88.1	-1.4	69	-8	7.1	-0.6	14.73
	South Bhagulpore and Monghyr.	Bhagulpore	591	311	416	569	...	106.4	60.0	90.6	76.3	83.6	...	81	...	6.8	...	18.18
	Southal Pergunnahs	Naya Doomka.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Hasaribagh	Hasaribagh	27.805	447	27.577	569	-0.05	100.8	70.7	91.2	76.3	83.2	-0.8	63	-6	6.1	...	7.99
	Lohardugga and Mosbuz.	Ranchee	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Singbhoom	Chaitanea	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

Bengal for the month of June 1883.

DISTRICT OBSERVATIONS.										Representative stations.	DISTRICT.	METEOROLOGICAL DIVISION.
RAINFALL.												
Of month.					Since 15th May.							
Mean of district.	Normal mean of district.	Variation from mean.	Number of rainy days.	Normal mean number of rainy days.	Mean of district.	Normal mean of district.	Variation from mean.	Mean number of rainy days.	Normal mean number of rainy days.			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Gopalpore	Pooree	ORISSA.
17.05	9.00	+8.05	13.8	11.5	17.91	10.50	+7.33	13.8	15.3	False Point		
16.95	8.75	+8.20	14.7	11.0	20.75	10.50	+10.19	21.4	15.1	Cuttack	Cuttack	SOUTH-WEST BENGAL.
17.68	7.20	+10.48	10.2	11.2	20.30	9.48	+10.91	22.6	16.1	Balasore	Balasore	
9.51	9.75	-0.24	15.0	13.8	11.77	13.41	-0.64	18.7	19.7	Saugor Island	South-West Midnapore and South 24-Pergunnahs.	SOUTH-WEST BENGAL.
7.67	9.00	-1.33	12.3	12.6	8.17	12.04	-3.87	14.3	17.2	Midnapore	Midnapore	
9.97	10.05	-0.08	16.7	16.1	11.00	13.06	-2.06	20.1	21.8	Calcutta	24-Pergunnahs, Howrah, and Hooghly.	SOUTH-WEST BENGAL.
8.66	9.05	-0.39	14.3	13.5	13.03	12.29	+0.74	17.3	18.2	Burdwan	Burdwan	
12.40	10.98	+1.42	16.0	15.4	15.10	13.58	+1.52	20.6	19.5	Ranigunj	West Burdwan, Bankura, and Beerbhoom.	SOUTH-WEST BENGAL.
9.50	9.44	+0.06	14.0	13.1	13.79	12.15	+1.64	20.9	17.4	Berhampore	Mooredabad	
8.01	10.23	-2.22	13.8	14.3	9.73	13.52	-3.79	19.0	10.4		Nuddia	SOUTH-WEST BENGAL.
9.04	12.73	-3.69	17.6	17.3	12.65	16.33	-3.68	22.5	23.5	Jessore	Jessore and Khosia	
45.62	29.87	+15.75	23.0	21.1	51.74	34.73	+17.01	30.5	27.6	Chittagong	Chittagong	SOUTH-WEST BENGAL.
19.63	19.47	+0.16	26.0	21.2	24.93	23.51	+1.42	34.5	27.9	Demagri	Chittagong Hill Tracts	
16.95	20.75	-3.80	23.3	20.5	19.68	25.12	-5.44	28.3	27.3	Barrisal	Backergunj	SOUTH-WEST BENGAL.
20.28	28.08	+7.80	21.0	19.8	43.03	33.93	+9.10	30.0	27.2	Noakholly	Noakholly	
7.99	12.91	-4.92	17.0	18.1	11.78	17.51	-5.73	23.8	24.2	Furreedpore	Furreedpore	SOUTH-WEST BENGAL.
7.83	18.33	-10.50	17.7	17.7	10.19	18.20	-8.01	23.4	23.8	Dacca	Dacca	
14.08	17.40	-3.32	21.0	21.0	19.59	22.62	-3.03	27.3	28.0	Commillah	Commillah	SOUTH-WEST BENGAL.
8.32	17.01	-8.69	17.0	19.2	12.22	21.36	-9.14	23.5	26.3	Mymensingh	Mymensingh	
8.10	12.80	-4.70	13.8	15.6	12.33	16.30	-4.00	17.3	21.2	Serajgunj	Bogra and Pubna	SOUTH-WEST BENGAL.
6.86	10.70	-3.84	15.0	14.4	10.41	13.48	-3.07	20.7	18.9	Rampore Beau-lash.	Rajshahye	
10.76	13.29	-2.53	17.5	15.4	13.23	19.10	-5.87	21.0	19.5	Dinagpore	Dinagpore	SOUTH-WEST BENGAL.
11.85	12.00	-0.15	18.8	17.3	21.10	20.18	-0.92	24.8	24.0	Rangpore	Rangpore	
20.55	32.81	-12.26	19.8	23.4	34.43	43.42	-8.99	30.2	31.9	Julpigoree	Julpigoree and Cooch Behar.	SOUTH-WEST BENGAL.
43.80	36.17	+7.63	23.5	24.4	46.59	44.95	+1.64	33.5	34.4	Darjeeling	Darjeeling Hill Tracts.	
22.96	11.89	+11.07	13.4	11.6	37.67	13.55	+24.12	15.0	14.7	Purneah	Purneah and North Bhagulpore.	SOUTH-WEST BENGAL.
15.11	7.14	+7.97	11.5	9.2	15.95	8.37	+7.58	12.8	11.3	Durbhunga	Mozufferpore and Durbhunga.	
4.76	8.43	-3.67	9.3	9.5	6.38	9.65	-3.27	12.0	11.4	Mothari	Chumpran	SOUTH-WEST BENGAL.
9.72	6.63	+3.09	12.5	8.4	9.85	7.51	+2.34	12.5	9.0	Chupra	Saran	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dehree	Shahabad	SOUTH BENGAL.
7.31	5.44	+1.87	11.3	8.9	7.83	5.97	+1.86	14.0	10.3	Buxar		
10.59	5.41	+5.18	10.9	8.0	11.56	6.79	+4.77	12.3	9.8	Gya	Gya	SOUTH BENGAL.
10.58	6.01	+4.57	10.8	8.0	16.61	7.30	+9.31	11.6	10.9	Bankipore	Patna	
10.90	6.76	+4.14	12.0	10.5	11.77	8.14	+3.63	14.0	13.7	Bhagulpore	South Bhagulpore and Monghyr.	SOUTH BENGAL.
11.45	9.21	+2.24	15.0	13.0	13.39	11.05	+2.34	18.8	16.0	Naya Doonka	Sonthal Pergunnahs	
7.29	8.39	-1.10	12.8	13.8	8.51	9.90	-1.39	16.0	17.8	Hasaribagh	Hasaribagh	SOUTH BENGAL.
10.00	7.87	+2.13	14.5	13.6	11.94	9.04	+2.90	15.3	17.1	Ranchoo	Lohardugga and Manbhoom.	
8.44	8.40	+0.04	15.0	16.2	9.55	10.71	-1.16	20.0	21.7	Chaibama	Singbhoom	

Table of Rainfall recorded at Stations

Metereological Division.	District.	Station.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
SOUTH-WEST BENGAL.	Pooree	Pooree	...	...	0.61	0.07	...	...	...	0.80	...	...	0.25	0.43	1.31	0.71	0.00	...	1.11	0.21	...	...
		Khurdah	0.72	...	...	0.12	...	...	...	...	0.10	...	0.10	0.75	2.04	0.97	0.05	...	0.03	0.73	...	...
		Bampur	...	...	...	1.07	...	...	...	...	...	...	...	0.16	0.90	...	...	...	...	...	...	0.20
		False Point	0.52	...	...	...	...	...	...	...	...	...	...	0.07	0.97	0.04	1.80	0.28	0.24	...	0.05	...
		Hoakitea	0.84	0.19	0.15	0.54	0.05	...	1.55	0.15	0.10	0.58	...
	Cuttack	Jaratasingpore	...	0.70	...	0.70	0.34	...	0.60	0.10	0.60	0.90	0.72	0.10	0.13	1.00	...
		Bauki	1.53	0.26	0.05	0.40	0.30	0.66	1.77	1.05	0.40	0.12	0.47	...
		Kendrapara	0.83	0.30	2.01	...	2.10	0.20
		Jajpore	0.35	0.70	...	0.90	0.30
	Balasore	Chandbali	0.70	0.70	1.20	0.75	0.20	1.10	0.20	0.20	1.25
		Bhuddruck	0.61	0.08	0.41	0.71	1.50	0.90	0.21
		Sorab	0.10	0.20	...	1.20	0.08	0.90	0.90	0.25	0.00	0.20	...	1.20	...	3.20	...
		Balasore	0.07	1.15	0.15	...	0.04	0.45	0.15	0.42	...	3.14	0.08	...	0.34	...	0.05	...
		Jeliasore	0.20	0.80	1.38	2.00	...	0.16	0.23	...	0.11	...
	Midnapore	Contal	0.17	0.77	0.67	...	0.47	0.67	1.24	0.17	0.11
		Saugor Island	0.30	0.54	...	1.07	...	0.20	0.60	0.95	0.15	...	0.70	0.48	...
		Tumlook	0.70	0.70	...
		Midnapore	0.03	0.51	...	0.02	...	0.02	0.32	0.60	0.41	...	0.30	0.16	0.17	...
	24-Pergunnahs	Ghattal	0.06	0.07	0.07	...	1.53	0.06	0.76	...
		Diamond Har- bour.	0.21	0.28	...	0.03	0.40	0.42	0.00	...	0.05
		Alipore Jail	1.80	0.04	0.23	...	0.35	0.50	0.88	0.32	0.85	0.02	...	0.60	0.02	0.35
		Barrackpore	0.48	0.57	1.05	0.60	0.37	0.47	...
		Dum-Dum	0.80	0.27	0.57	0.00	...	0.40	...	3.24	0.00	...	0.25	0.22	0.29
Howrah	Barnet	0.50	...	...	...	0.12	...	...	...	...	...	...	0.09	...	1.00	...	3.48	...	0.13	...	0.31	...
	Busserhat	0.67	...	2.34	...	...	...	...	...	0.37	...	...	0.62	0.60	0.03	0.18	0.51	0.64	0.06	...	0.30	1.20
	Howrah	0.30	...	0.02	...	0.17	...	...	...	...	...	1.46	...	0.10	0.44	2.48	...	...	0.02	0.14	0.23	...
	Moheareka	...	...	...	...	1.32	0.53	...	...	...	...	0.78	...	0.09	0.31	0.30	0.20	...	0.22	0.33	...	...
	Hooghly	0.03	0.71	...	0.06	0.08	...	...	...	...	...	0.02	...	1.28	0.03	5.77	0.03	...	0.22	0.43	0.36	...
Burdwan	Hooghly	1.18	...	...	...	...	0.16	...	...	...	...	...	0.43	0.35	0.44	1.50	...	...	0.01	...	1.25	...
	Jehanabad	...	...	...	...	...	...	...	...	...	...	0.11	...	0.10	...	1.15	1.72	0.23	...	...	3.60	...
	Culina	1.20	...	...	1.33	...	...	...	...	...	...	...	2.53	0.15	...	0.27	0.05	...	0.07	...	1.20	...
	Burdwan	0.04	...	...	0.81	...	...	...	...	...	1.62	0.00	...	0.30	1.31	0.06	0.04	...	0.03	3.05	...	
Bankura	Culwa	...	...	...	0.18	0.45	...	...	...	...	...	...	0.07	0.19	...	0.10	1.27	...	...	2.10	0.20	...
	Ranogunge	...	...	...	...	...	...	...	...	...	0.55	...	0.38	3.25	0.24	0.25	0.70	0.22	...	0.42	2.75	1.65
	Bankura	0.04	...	...	...	...	0.04	...	...	...	0.00	0.11	...	...	0.02	0.80	0.04	0.04	0.44	0.32	1.04	...
	Bahonpore	0.83	...	...	...	...	...	...	...	...	1.03	...	...	0.42	1.84	0.47	1.10	0.20	0.10	0.45	0.10	...
Boerboom	Mulana	...	...	...	...	...	...	...	...	...	0.82	0.50	...	1.04	0.35	0.51	0.20	0.18	...	...	1.87	0.00
	Khutra	0.11	...	...	...	...	...	...	...	...	...	...	0.56	0.72	...	0.70	1.14	...	...	...	...	...
	Uth. Snory	...	...	...	...	...	0.30	...	...	...	0.00	...	1.17	2.08	0.00	0.25	1.30	0.20	0.03	...	0.35	0.00
	Hetampore	...	...	...	...	...	0.47	...	...	...	0.59	0.06	0.34	0.04	...	0.41	...	0.71	...	...	1.55	...
Nuddea	Bongong	...	...	...	0.85	...	...	...	...	...	...	...	2.70	...	...	0.30	0.70	0.55	...	1.55	...	...
	Banagout	1.50	...	...	...	...	...	...	...	...	...	...	0.07	0.02	...	4.51	...	0.07	0.32	0.44	0.15	0.20
	Kishunghur	...	0.70	...	...	...	...	...	...	...	...	...	0.30	...	...	...	0.12	...	...	0.43	0.23	...
	Chondanaga	...	...	...	0.10	...	...	...	...	...	...	...	...	0.25	0.80	...	0.21	0.40	...	...	0.60	...
	Meherpore	...	...	...	0.16	...	...	...	...	...	...	...	...	4.16	0.06	...	0.00	...	0.17	0.10	0.32	...
Khoolna	Kooshien	...	...	...	0.85	...	...	...	...	...	...	...	...	2.80	0.05	0.11	0.31	0.50	...	...	0.47	...
	Satkira	...	...	0.30	...	0.80	0.95	...	...	...	...	0.15	0.34	0.31	...	0.05	0.44	1.10	0.01	0.15	0.00	1.05
	Ingurhat	...	...	0.30	...	...	...	...	...	...	...	0.15	2.33	...	...	...	0.02	0.48	0.15	0.04	0.57	...
	Khoolna	...	...	0.31	0.41	0.50	...	...	...	...	...	0.41	1.40	0.10	...	0.02	0.39	0.73	0.00	0.40	0.31	1.05
Jessore	Narail	...	...	0.11	...	...	...	...	...	...	...	...	0.31	...	...	0.05	0.08	...	0.75	0.05	0.11	...
	Jessore	...	...	...	...	...	...	...	...	...	...	...	1.04	0.81	0.30	0.11	1.12	...	0.08	0.06	0.18	0.41
	Jamshed	...	...	0.27	...	...	...	...	...	...	...	...	1.27	0.16	0.38	0.18	0.47	0.38	0.10	...	0.12	0.05
	Mazoorah	...	...	...	...	...	...	...	...	...	...	...	1.71	...	0.43	0.05	2.05	0.42	0.17	...	0.65	0.39
Meershadabad	Kandi	0.10	0.73	0.77	...	0.20	0.30	0.09	0.12	0.20	0.08	0.04	...	2.88
	Rampore Hunt	...	...	...	1.25	0.26	...	...	...	...	...	...	...	0.05	0.26	0.06	1.35	...	0.77	0.25	0.81	1.04
	Bahonpore	...	...	...	0.80	...	...	...	...	...	...	...	...	...	0.34	0.91	0.24	0.06	0.38	0.02	...	1.75
	Lalbahar	...	...	...	0.60	...	...	...	...	...	...	...	...	...	...	0.51	0.00	...	0.28	...	...	...
	Achingunge	...	...	0.10	1.00	0.02	...	...	...	...	...	...	...	0.00	0.24	0.11	0.02	0.19	0.10	1.21	...	1.90
SOUTH-WEST BENGAL.	Chittagong	Jungpore	...	...	...	0.05	...	...	...	...	1.00	...	...	0.08	0.06	0.19	0.05	0.18	0.05	0.04	2.78	0.05
		Lalgaon	0.23	1.30	0.21	0.08	0.13	0.27	0.06	0.00	0.15	0.06	0.80	1.15
		Cox's Bazar	0.07	0.11	0.51	0.08	0.25	...	0.03	0.32	3.12	1.19	0.01	...	1.44	3.13	5.05	1.02	1.47	0.07	1.75	1.73	
		Chittagong	1.10	...	0.05	0.78	0.01	2.01	4.00	2.04	1.93	2.76	6.37	0.51
	Chittagong Hill Tracts.	Rangamati	0.10	0.01	...	0.37	0.02	0.11	0.31	2.59	0.15	2.13	...	0.25	0.35	0.50	1.09	2.00	1.00	0.94	0.00	0.11	...
		Rama	0.12	3.30	1.00	0.25	0.76	0.44	0.60	0.15	0.20	0.45	1.05	1.43	1.05	2.05	0.00	1.20	...
		Agartala	0.40	...	0.20	...	2.35	1.15	0.35	1.20	1.35	0.07
		Backergunge
	Noakhally	Patuakhali	...	0.02	0.80	...	...	...	...	...	0.05	0.40	0.10	1.10	0.35							

in Bengal in June 1883.

21	22	23	24	25	26	27	28	29	30	Number of rainy days.	Average number of rainy days.	Total rainfall for the month.	Average rainfall for the month.	Highest rainfall during the month.	Total rainfall from 1st January 1883 up to 30th June 1883.	Average rainfall from 1st January up to 30th June 1883.	Station.	District.	Meteorological division.
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	14	14.00	18.54	8.22	9.44	20.75	15.56	Pooree.	Pooree	OMISSA.
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	15	15.00	18.54	8.22	9.44	21.04	16.08	Khurdah.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	16	16.00	18.54	8.22	9.44	21.34	16.59	Banpur.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	17	17.00	18.54	8.22	9.44	21.64	17.50	Prabhu Point.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	18	18.00	18.54	8.22	9.44	21.94	18.41	Hookitola.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	19	19.00	18.54	8.22	9.44	22.24	19.32	Jagatsingapore.	Cuttack	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	20	20.00	18.54	8.22	9.44	22.54	20.23	Banki.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	21	21.00	18.54	8.22	9.44	22.84	21.14	Cuttack.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	22	22.00	18.54	8.22	9.44	23.14	22.05	Kondrapara.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	23	23.00	18.54	8.22	9.44	23.44	22.96	Jajpore.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	24	24.00	18.54	8.22	9.44	23.74	23.87	Chandball.	Balitore	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	25	25.00	18.54	8.22	9.44	24.04	24.78	Shudduck.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	26	26.00	18.54	8.22	9.44	24.34	25.69	Sorah.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	27	27.00	18.54	8.22	9.44	24.64	26.60	Balasore.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	28	28.00	18.54	8.22	9.44	24.94	27.51	J. Hasore.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	29	29.00	18.54	8.22	9.44	25.24	28.42	Baripadah.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	30	30.00	18.54	8.22	9.44	25.54	29.33	Contal.	Midnapore	SOUTH-WEST BENGAL.
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	15	15.00	10.67	11.04	3.76	20.20	19.94	Sanger Island.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	16	16.00	10.67	11.04	3.76	20.50	20.24	Tamluk.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	17	17.00	10.67	11.04	3.76	20.80	20.54	Midnapore.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	18	18.00	10.67	11.04	3.76	21.10	20.84	Ghatol.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	19	19.00	10.67	11.04	3.76	21.40	21.14	Diamond Har-	24-Pergunnahs	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	20	20.00	10.67	11.04	3.76	21.70	21.44	bour.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	21	21.00	10.67	11.04	3.76	22.00	21.74	Alipore Jail.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	22	22.00	10.67	11.04	3.76	22.30	22.04	Barrackpore.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	23	23.00	10.67	11.04	3.76	22.60	22.34	Dum-Dum.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	24	24.00	10.67	11.04	3.76	22.90	22.64	Barasat.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	25	25.00	10.67	11.04	3.76	23.20	22.94	Busearchat.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	26	26.00	10.67	11.04	3.76	23.50	23.24	Howrah.	Howrah	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	27	27.00	10.67	11.04	3.76	23.80	23.54	Mohorekta.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	28	28.00	10.67	11.04	3.76	24.10	23.84	Serampore.	Hooghly	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	29	29.00	10.67	11.04	3.76	24.40	24.14	Hooghly.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	30	30.00	10.67	11.04	3.76	24.70	24.44	Johannabad.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	18	18.00	8.30	8.69	2.53	19.14	18.88	Culna.	Burdwan	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	19	19.00	8.30	8.69	2.53	19.44	19.18	Burdwan.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	20	20.00	8.30	8.69	2.53	19.74	19.48	Cuttwa.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	21	21.00	8.30	8.69	2.53	20.04	19.78	Raneegunge.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	22	22.00	8.30	8.69	2.53	20.34	20.08	Bankoora.	Bankoora	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	23	23.00	8.30	8.69	2.53	20.64	20.38	Bishnupore.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	24	24.00	8.30	8.69	2.53	20.94	20.68	Mahara.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	25	25.00	8.30	8.69	2.53	21.24	20.98	Khatra.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	26	26.00	8.30	8.69	2.53	21.54	21.28	Rh. Noory.	Beerbhoom	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	27	27.00	8.30	8.69	2.53	21.84	21.58	Hetanpore.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	28	28.00	8.30	8.69	2.53	22.14	21.88	Bongong.	Nuddon	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	29	29.00	8.30	8.69	2.53	22.44	22.18	Kabaghat.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	30	30.00	8.30	8.69	2.53	22.74	22.48	Kishingshur.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	18	18.00	4.20	4.46	1.10	19.14	18.88	Choodanga.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	19	19.00	4.20	4.46	1.10	19.44	19.18	Meh-pore.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	20	20.00	4.20	4.46	1.10	19.74	19.48	Kooshtea.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	21	21.00	4.20	4.46	1.10	20.04	19.78	Satkira.	Khoolna	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	22	22.00	4.20	4.46	1.10	20.34	20.08	Bagarhat.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	23	23.00	4.20	4.46	1.10	20.64	20.38	Khoolna.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	24	24.00	4.20	4.46	1.10	20.94	20.68	Narail.	Jessore	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	25	25.00	4.20	4.46	1.10	21.24	20.98	Jessore.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	26	26.00	4.20	4.46	1.10	21.54	21.28	Jhanda.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	27	27.00	4.20	4.46	1.10	21.84	21.58	Magoorah.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	28	28.00	4.20	4.46	1.10	22.14	21.88	Kandi.	Moorshedabad	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	29	29.00	4.20	4.46	1.10	22.44	22.18	Rampore Haut.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	30	30.00	4.20	4.46	1.10	22.74	22.48	Berhampore.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	18	18.00	7.08	7.24	1.91	19.14	18.88	Lalbach.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	19	19.00	7.08	7.24	1.91	19.44	19.18	Azingunge.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	20	20.00	7.08	7.24	1.91	19.74	19.48	Jungipore.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	21	21.00	7.08	7.24	1.91	20.04	19.78	Lalgola.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	22	22.00	7.08	7.24	1.91	20.34	20.08	Cox's Bazar.	Chittagong	EAST BEN- GAL.
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	23	23.00	7.08	7.24	1.91	20.64	20.38	Chittagong.	...	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	24	24.00	7.08	7.24	1.91	20.94	20.68	Rangamati.	Chittagong	...
0.16	0.07	0.23	0.30	0.10	0.10	0.10	0.10	0.10	0.10	25	25.00	7.08	7.24	1.91	21.24	20.98	Ruma.	Hill Tracts.	...
0.16																			

Table of Rainfall recorded at Stations

Meteorological division.	District.	Station.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NORTH BHARAT	Pabna	Pabna	0.75	...	1.43	2.32	0.12	0.06	0.04	0.21	0.11	1.32	0.04	0.15	0.40
		Semjunge	0.35	3.10	...	0.05	1.00	0.30	0.43	0.05	...
	Rogra	Sherpore	...	...	...	0.09	0.60	...	...	...	...	1.16	1.30	...	...	0.57	0.24	0.85	...	0.23	...
		Nowkhilla	...	...	...	...	1.18	...	...	...	...	0.05	0.85	...	0.03	0.11	0.81	0.71	1.92	0.04	0.07
		Rogra	...	...	...	...	...	0.41	...	...	...	0.04	1.75	0.02	0.00	0.08	0.74	0.37	0.32	0.12	0.03
		Panchbibi	...	...	...	...	...	...	...	...	...	...	2.30	0.23	...	0.34	0.23	2.19	1.14	0.10	...
	Rajshahiye	Benulash	...	...	...	1.33	0.42	...	...	...	...	...	0.05	0.17	0.05	0.11	0.13	...	0.00	...	0.28
		Nattora	...	...	...	...	...	...	...	...	...	...	1.20	0.20	...	...	0.40	0.18	0.20	...	0.40
	Maldah	Maldah	...	...	...	1.03	...	...	...	...	0.02	...	0.10	...	0.32	0.32	1.35	1.03	1.37	0.71	0.44
	Dinajpore	Mohadebpore.	0.15	0.22	0.02	0.40	0.63	0.31	...	0.04	0.45	1.10	0.21	0.55	0.55
		Churamon	...	...	...	...	...	...	...	...	...	...	0.73	...	...	...	0.09	1.00	2.35	0.20	0.10
		Rangona	...	...	...	...	...	...	...	...	...	1.44	0.17	...	...	0.10	0.13	0.63	2.02	1.70	0.14
		Dinajpore	...	...	...	0.76	0.02	...	...	...	...	0.33	0.67	0.24	...	0.02	0.02	0.07	1.03	0.41	0.02
	Bangpore	Balourhat	...	...	...	...	0.20	...	...	...	...	...	1.25	...	...	0.33	0.80	0.24	1.25	0.21	0.67
		Bhawanigunge	...	...	...	...	...	0.72	...	0.25	...	...	0.08	1.03	...	0.31	0.10	0.74	0.90	1.90	1.02
		Rangpore	...	...	0.41	0.10	1.00	...	0.05	...	...	0.08	0.02	0.21	...	...	...	0.07	1.50	0.45	0.00
		Kurigram	...	...	1.00	0.30	1.50	...	...	...	...	1.00	0.81	0.05	...	0.50	0.81	0.05	1.00	0.00	1.50
	Julpigore	Bagdogra	...	...	...	...	0.44	...	...	...	...	0.00	0.57	0.04	...	0.08	0.21	0.08	2.27	1.30	0.00
		Julpigore	...	0.12	...	...	1.54	...	...	0.30	...	...	0.32	0.05	...	...	0.91	0.64	3.58	3.30	2.37
	Cooch Behar	Dinhata	0.21	3.00	1.02	0.35	...	0.27	0.03	0.35	0.41	0.58	0.19	0.31
		Cooch Behar	...	...	0.20	4.50	0.35	0.04	0.70	...	...	1.00	0.44	0.05	0.20	...	...	1.11	0.47	1.14	0.11
		Mokulpore	...	...	...	1.23	...	...	...	...	...	0.67	0.18	...	...	...	...	0.21	1.43	1.48	0.43
		Matlabhanga	...	...	0.19	1.02	0.11	0.27	...	...	...	1.34	0.11	0.05	...	0.14	...	0.74	0.93	0.67	0.22
	Darjeeling Hill	Buxa	4.35	2.72	1.35	1.80	...	...	...	...	...	0.22	0.30	...	0.25	...	0.20	1.95	0.40	1.00	1.00
		Darjeeling	...	0.80	0.82	...	0.06	0.03	...	...	...	1.15	0.23	0.02	0.02	0.13	...	0.27	0.19	0.18	5.48
		Kalimping	...	0.55	0.90	0.25	0.04	...	...	...	...	0.71	0.23	0.41	0.04	...	0.25	3.30	0.21	0.00	0.00
		Silgram	...	...	...	...	...	...	...	...	...	0.60	...	...	...	...	0.44	1.27	0.60	5.40	0.12
NORTH BHARAT	Purneah	Kassengunge	...	...	...	...	...	...	...	...	...	...	...	...	0.07	0.07	0.13	3.32	5.43	0.00	1.70
		Arracah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.47	0.70	3.73	4.80	0.00
	North Bhagulpore.	Purneah	...	...	...	1.20	...	0.31	...	...	...	0.01	...	...	...	...	0.19	2.45	1.23	0.43	1.67
		Maddapore	...	...	...	0.71	...	...	...	...	...	...	...	...	...	...	0.55	0.70	1.75	3.15	7.50
	Durbhunga	Seepool	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.30	2.08	2.54	4.40	3.91
		Tajpore	...	...	...	...	...	0.11	...	...	...	0.77	...	...	...	...	0.18	0.22	1.50	3.13	1.93
		Durbhunga	...	...	...	0.66	...	0.17	...	...	...	...	...	...	...	...	...	0.63	1.02	5.02	2.52
		Machubani	...	...	1.10	0.15	...	0.47	...	...	...	...	...	...	...	...	...	0.40	1.82	4.04	1.33
	Moufferpore	Sitamathi	...	...	...	0.62	...	0.74	...	...	...	...	...	...	...	...	0.57	0.75	3.75	...	0.00
		Moufferpore	...	...	...	...	...	1.11	...	...	...	...	...	...	...	...	0.08	2.85	12.40	0.42	...
	Chumbarun	Hajipore	...	...	...	...	...	0.14	...	...	...	...	...	...	...	...	0.09	0.80	4.51	0.30	0.14
		Motihari	...	...	...	...	...	1.05	...	...	...	...	...	...	...	...	...	0.01	...	0.70	...
		Baitiah	...	...	...	...	...	0.30	...	...	...	...	...	...	...	...	1.08	0.18	0.30	...	...
		Gopalpore	...	...	...	...	...	1.05	...	...	...	...	...	...	...	...	0.03	3.80	0.25	0.13	...
	South BHARAT	Sewan	...	...	0.10	...	...	0.35	...	...	...	0.15	...	...	...	...	0.02	0.01	0.00	0.74	0.03
		Chuprah	...	...	0.11	0.05	...	0.00	...	...	...	0.01	...	...	...	...	0.21	...	0.02	3.55	1.48
	Shahabari	Buxar	...	...	...	...	...	0.08	...	0.21	...	...	1.00	1.54	0.30	0.33	1.03	0.75	...	...	...
		Bhiteeah	...	...	...	...	...	0.20	...	...	...	...	0.50	0.30	0.10	0.80	...	...	...	...	0.10
		Sasseram	...	...	...	...	...	0.12	...	...	...	...	0.03	0.04	0.32	0.15	2.50	0.85	...	...	0.05
		Arrah	...	...	0.09	...	...	0.11	...	0.46	...	...	...	...	...	...	0.05	1.20	4.60	0.60	...
	Gya	Aurangabad	...	...	...	...	...	0.33	...	...	...	...	...	0.15	...	0.38	0.05	0.08	3.11	...	...
		Gya	...	...	...	...	...	0.21	...	...	...	...	...	...	...	...	1.31	2.25	...	1.04	0.21
		Nowadah	...	...	...	...	...	1.05	...	...	...	...	...	...	...	...	0.04	0.58	...	0.82	1.79
		Jehanabad	...	...	...	...	...	0.18	...	...	...	...	...	...	...	...	0.04	0.00	...	1.50	0.82
	Patna	Patna	...	0.04	0.03	...	...	0.23	...	...	...	...	...	...	...	0.03	...	0.06	1.23	0.35	5.13
		Dahapore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.05	3.20	3.60	0.05	0.20
		Bahar	...	...	...	...	...	0.12	...	...	...	...	...	...	...	...	0.08	...	5.17	0.45	10.95
		Bahar	...	...	...	...	...	0.10	...	...	...	...	...	...	...	...	0.02	...	0.10	0.40	0.40
	Monghyr	Begoozeral	...	...	...	...	...	...	...	...	...	0.01	...	...	...	0.20	...	0.20	0.80	1.50	2.62
		Monghyr	...	...	...	...	...	...	...	...	...	0.31	...	...	...	...	0.01	0.30	0.80	0.48	1.25
	South Bhagulpore.	Jamui	...	...	...	...	...	0.40	...	...	...	1.10	...	...	...	0.10	...	1.25	0.13	0.21	...
		Bhagulpore	...	...	...	...	...	...	...	...	...	1.01	...	...	...	...	0.17	...	...	0.43	5.40
	South Per- gumunda.	Banks	...	...	...	...	...	...	...	...	...	0.10	...	...	...	...	...	1.50	0.10	...	1.00
		Rajmahal	...	...	...	...	...	...	...	...	...	0.20	...	...	...	...	...	0.54	0.38	1.02	0.54
		Godda	...	...	0.11	0.14	...	...	...	...	...	0.31	...	...	...	...	...	2.11	0.43	0.44	...
		Pakour	...	...	...	1.20	0.87	...	...	...	...	...	...	...	...	...	...	0.18	0.50	...	0.75
	Churia Nag- pore.	Nya Doomba	...	...	...	0.11	0.00	0.15	...	...	...	0.06	...	0.04	0.50	0.03	0.36	5.75	0.65	0.04	0.71
		Dashtur	...	...	...	...	...	0.03	...	...	...	...	...	...	...	...	0.01	3.05	...	0.44	...
		Jamtara	...	...	...	...	...	0.18	...	...	...	0.47	...	1.48	0.00	...	0.01	2.80	...	0.12	0.73
		Jamtara	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.86
	Hazaribagh	Pachamba	...	...	...	...	...	0.60	...	...	...	0.46	...	...	...	0.02	0.04	0.30	2.45	0.19	0.15
		Hazaribagh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.01	1.18	0.43	0.00	2.12
		Seemagurh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.15	0.04	0.63	2.40
		Mowdee Hills	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.13	0.14	0.75	1.13
	Lohardugga	Jhoomrah Hills	...	...	...	...	...	...	...	...	...	...	0.10	0.10	0.30	0.60	0.20	1.00	...	...	...
		Ranchi	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Sankhoom	Palamow	...	...	...	0.10	0.02	...	...	...	...	...	...	0.55	0.50	0.34	3.00	2.35	1.15		

in Bengal in June 1883—concluded.

21	22	23	24	25	26	27	28	29	30	31	Number of rainy days.	Average number of rainy days.	Total rainfall for the month.	Average rainfall for the month.	Heaviest rainfall during the month.	Total rainfall from 1st January up to 30th June 1883.	Average rainfall from 1st January up to 30th June 1883.	Station.	District.	Meteorological Division.
1.01	0.00	0.00	0.25	0.00	0.00	0.55	0.00	0.41	0.51	0.00	10	20.7	9.85	12.24	3.32	24.24	20.38	Pubna	Pubna	NORTH BENGAL.
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11	16.5	8.62	10.05	3.10	24.15	24.15	Sherajunge.	Bogra	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11	18.4	5.23	12.01	1.30	15.05	25.65	Sh. rpo.	Nowahilla.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17	20.1	6.50	12.30	1.02	18.30	24.00	Nowahilla.	Bogra	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19	19.2	7.31	15.20	1.78	14.12	30.02	Nowahilla.	Bogra	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10	16.3	9.03	11.23	2.30	10.02	21.43	Panchobhi.	Panchobhi.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17	10.9	6.00	10.00	2.28	13.70	20.76	Beaulah.	Rajahmundry.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8	15.1	4.35	10.00	1.20	21.83	22.24	Nattore.	Rajahmundry.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20	10.5	9.08	10.02	1.63	14.57	17.49	Maldah.	Maldah.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10	15.8	6.31	14.00	1.10	11.44	23.71	Mohadapore.	Dinagapore.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15	18.3	11.33	13.55	2.35	14.00	19.05	Churaman.	Dinagapore.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16	10.0	12.47	15.14	2.54	22.10	24.24	Dinagapore.	Dinagapore.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20	10.4	12.01	17.08	2.08	25.02	28.71	Dinagapore.	Dinagapore.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15	?	10.58	?	3.40	15.53	?	Baloorghat.	Dinagapore.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19	15.0	16.08	15.02	3.50	24.43	24.43	Bhawanigunge.	Bungpore.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20	14.9	10.28	21.45	2.00	20.49	30.38	Bhawanigunge.	Bungpore.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19	14.0	15.13	21.07	1.90	42.34	42.34	Kurigram.	Bungpore.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17	17.3	17.89	27.57	3.87	54.73	46.85	Barigram.	Bungpore.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18	21.8	33.85	20.90	6.58	48.80	47.74	Julpigoree.	Julpigoree.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18	19.3	13.57	31.18	3.06	30.82	52.44	Dinhatia.	Cooch Behar.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23	20.4	25.30	35.20	5.74	47.07	57.18	Cooch Behar.	Cooch Behar.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17	20.5	25.26	20.30	5.75	40.01	48.42	Mekligunge.	Cooch Behar.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23	21.5	33.20	31.11	7.73	50.51	53.48	Matabhanga.	Cooch Behar.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21	25.4	47.08	47.17	6.24	89.30	82.82	Buxa.	Darjeeling.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25	27.8	39.62	25.07	9.15	51.80	40.15	Darjeeling.	Darjeeling.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23	?	32.09	?	6.21	40.00	?	Kalimpong.	Darjeeling.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12	20.7	22.63	16.20	5.25	20.54	24.74	Kisengunge.	Purneah.	NORTH BENGAL.
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12	16.9	24.82	14.00	7.04	33.47	22.30	Arrah.	Purneah.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16	20.1	10.10	11.02	2.45	14.00	18.18	Purneah.	Purneah.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12	18.5	30.51	8.62	10.20	34.21	14.85	Madraspore.	North Bhagulpore.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10	17.1	23.75	9.66	5.30	27.75	14.91	Scoopool.	North Bhagulpore.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11	13.5	14.19	7.34	8.13	16.44	10.87	Tajpore.	Durbhanga.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13	14.2	10.10	8.20	6.52	22.26	12.36	Durbhanga.	Durbhanga.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14	14.3	15.30	8.07	4.06	19.07	14.30	Madhubani.	Durbhanga.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10	11.3	7.32	7.28	2.75	11.68	13.89	Sitamarhi.	Mouafferpore.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12	15.4	20.00	6.04	12.40	23.62	11.44	Mouafferpore.	Mouafferpore.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9	17.2	15.65	7.12	9.39	18.30	10.77	Majipore.	Mouafferpore.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8	18.0	5.24	8.14	1.40	10.14	13.59	Motihari.	Chumpanun.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8	13.1	4.74	8.03	1.68	10.83	14.28	Bettiah.	Chumpanun.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12	15.8	4.30	7.54	1.05	0.45	12.50	Gopalgunge.	Chumpanun.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13	10.2	7.08	7.54	1.80	10.40	11.32	Sewan.	Chumpanun.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12	16.7	11.87	6.42	3.55	13.94	9.65	Chupra.	Chumpanun.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13	17.5	7.67	4.92	1.05	9.90	7.36	Buxar.	Shahabad.	SOUTH BENGAL.
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8	15.2	2.40	5.50	0.50	5.10	8.02	Bhubooh.	Shahabad.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13	18.4	7.51	5.54	2.50	10.40	8.02	Sasseram.	Shahabad.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11	18.0	11.62	9.90	4.50	13.92	10.51	Arrah.	Shahabad.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11	15.4	8.38	5.48	3.11	11.60	8.35	Aurangabad.	Gya.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12	18.7	14.60	9.40	9.04	17.51	9.79	Gya.	Gya.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11	15.8	8.07	9.05	2.00	12.51	10.12	Nowadah.	Gya.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9	13.9	11.32	5.34	7.68	15.00	8.60	Jehanabad.	Gya.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12	18.1	14.63	7.04	6.35	17.61	10.53	Patna.	Patna.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8	15.8	11.05	7.65	5.20	12.70	9.65	Dinapore.	Patna.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10	18.4	26.05	7.32	10.35	27.83	11.08	Behar.	Patna.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13	14.4	14.39	5.55	6.40	16.14	9.20	Barh.	Patna.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13	17.1	18.75	6.32	8.11	22.30	10.27	Reagonserai.	Monghyr.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9	19.4	8.82	6.85	3.31	11.00	10.72	Monghyr.	Monghyr.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9	18.2	6.83	6.74	3.23	8.03	11.20	Jamui.	Monghyr.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15	19.1	14.65	8.27	5.40	17.01	13.24	Bhagulpore.	South Bhagulpore.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10	10.2	5.57	8.02	1.00	7.60	12.47	Banks.	South Bhagulpore.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11	16.0	7.86	10.51	1.92	11.01	16.70	Rajmehal.	Southal Pargunnahs.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13	17.3	5.92	7.45	2.11	8.50	11.71	Gadda.	Southal Pargunnahs.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14	15.2	17.41	13.05	4.20	24.49	19.72	Pakour.	Southal Pargunnahs.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20	23.3	14.03	9.91	5.35	16.81	16.43	Nya Doomba.	Southal Pargunnahs.	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16	21.2	12.20	6.72	3.00					

METEOROLOGICAL AND RAINFALL SUMMARY FOR THE MONTH OF JUNE 1883.

JUNE is meteorologically the most important month of the year. It usually witnesses the establishment of the south-west monsoon over Northern India. The distribution of rain during the month generally indicates the chief features of the rains during the whole south-west monsoon period.

The south-west monsoon usually commences on the east coast of the Bay in the last week of May or the first week of June. It advances northwards sometimes as a wave of rainfall, and sometimes as a cyclonic storm. It is usually established in South Bengal during the first or second week of June, and if the conditions are normal, extends rapidly eastwards up the Gangetic valley to Behar during the second or third week of the month.

The circumstances and conditions accompanying its establishment are different in Bengal from what they are on the Bombay coast. The south-west monsoon current is merely a remarkably steady and prolonged sea wind due to conditions and actions similar in character to those which produce the sea breezes of the hot weather. Its strength and persistence are not to be measured by the average force of the wind which on the Bengal coast is less than the strength of the local sea breezes of the hot weather months, but by the extent of the sea area over which it prevails, and the height of the atmosphere which participates in the motion. The Bengal sea breezes of the hot weather months commence in March, and are confined to the immediate neighbourhood of the coast. They gradually extend further south during April and May. They affect comparatively a small height of the atmosphere. But blowing as they do into the low and extensive plains of Bengal, their influence is felt over the whole of Bengal, and increases with the increased extent of sea area over which they blow. They thus give frequent thunderstorms and rain to Bengal, the amount of which increases during April and May, but the distribution of which is the same in both months, as it depends mainly on the geographical configuration, &c., of the country in its relation to the same winds. On the Bombay coast the high range of the Western Ghâts do not permit any such continuous increase of action, as they form an almost complete barrier to the sea winds. Hence throughout the hot weather months the sea breezes at Bombay are confined to a very narrow belt of the coast, and affect a very small portion of the atmosphere as compared with the Bengal sea breezes. Hence also they very rarely give rise to storms or rain, and thus differ considerably from the corresponding sea winds in Bengal, although due to similar causes.

The development or transformation of the local sea winds of the hot weather months into the more important and extensive sea winds of the rains is very different in its character in the two cases. In Bengal there is no large or sudden change. The humidity increases slightly, the sky becomes more clouded, and rain falls more frequently. In those parts of the Province only which are beyond the direct influence of the sea breezes (Behar and Chutia Nagpur) is the change a large and marked one. On the Bombay coast, on the other hand, it is a change from sultry weather, clear skies, and local winds to strong general winds, overcast skies and heavy rainfall. Hence in Bengal the change is a development of previous conditions, and it is rarely possible to assign a particular date for the commencement of the monsoon. It is on the other hand a transformation, a reversal of conditions on the Bombay coast, the date of which can be assigned exactly. In Behar it may be added the commencement of the south-west monsoon is usually shown by a steady increase in the humidity of the air for some days previous to the occurrence of rainfall.

The Bombay branch of the monsoon current usually sets in about the middle of June, and advances slowly across Central India and the Central Provinces where it is generally not fully established until the end of the month. When it is fully established it meets in its eastward progress at an obtuse angle the current from the Bengal coast advancing up the Gangetic plain. Hence arises a very considerable amount of interaction, the extent and position of which depends on the varying relative strengths of the two currents. Consequently a large part of the Province of Bengal is, during nearly the whole of the rains subject to the influence of, and receives its rainfall from, both currents. This, however, rarely occurs before the end of June. Hence the rainfall of the month of June occurs under similar conditions to what it does in April and May, with the exception that the current is much stronger and deeper, and more largely charged with aqueous vapour. Consequently the rainfall distribution of the month of June is similar to that of the preceding two months. The lines of equal rainfall run north and south, or parallel to the hill barrier of East and North Bengal, and the amount decreases rapidly from east to west.

It is an important fact that the rainfall during the south-west monsoon is not a steady action. It occurs rather as a series of pulsations or waves of aqueous vapour condensation and rainfall. The intervals between the bursts of general rainfall are extremely favourable to the formation of cyclonic vortices at the head of the Bay, which advance landwards across the Bengal or Orissa coast, and give heavy and occasionally excessive local rainfall to the districts over which they pass. Hence the important meteorological features of the month are the character and date of the commencement of the south-west monsoon, the occurrence of cyclonic storms or disturbances, and the distribution of the rainfall.

Establishment of the South-West Monsoon.—The monsoon commenced very feebly on the Aracan and Pegu coast in the last week of May, when moderate rain fell, and continued until the 3rd of June. The first considerable fall of rain with rough weather occurred on that coast on the 3rd and 4th. It increased in amount and extended northwards. At the

same time the humidity began to increase in Behar. Rainfall was fairly general over South Bengal during the second week of the month, more especially after the 11th. The rainfall extended over the whole Province during the next week. In Behar and Chutia Nagpur the rains were ushered in from the 15th to the 18th by a cyclonic disturbance of considerable intensity, which gave remarkably heavy rain.

Barometric depressions.—Two were formed during the month at the head of the Bay. The first was generated in the north-west angle of the Bay, quite close to the Balasore coast, and in the Balasore and Midnapore districts on the 13th and 14th. It gave moderately heavy rain to North Orissa and South-West Bengal, but was of little importance until the 15th, when it had advanced into South Behar. It then apparently began to draw large supplies of aqueous vapour from the monsoon current, which had by that time advanced into North Bengal and Behar. It moved across the Patna district into North Behar and passed into the northern part of the Purneah district, and gave excessive rainfall attended with heavy floods over a large part of Behar, more especially the Gya, Patna, Mozufferpore, Durbhunga, North Bhagulpore, Purneah, and Darjeeling hill districts. It broke up on the evening of the 19th or morning of the 20th in the Purneah district. The second depression and cyclonic vortex began to form on the 26th of the month. It followed a brief period of light winds and partial rainfall. Its existence was first indicated by the wind direction at Saugor Island on the morning of the 26th, when it was to the south-east of that station. It remained stationary until the 28th, during which period it gradually increased in intensity. It crossed the Balasore coast on the evening of the 29th, and passed across the North Orissa hills into the Central Provinces. It was chiefly remarkable for the very low barometer at its centre (29.1") and for the very strong winds (almost of hurricane force) experienced by ships which passed through its eastern quadrant in the Bay.

Rainfall of month.—The average rainfall of the month exceeds 5 inches at all stations except Buxar, for which it is 4.7 inches. It varies from 5 to 10 inches at all stations (excepting Buxar) to the west of a curved line running through Rajmehal, Berhampore, Beerbhoom, Calcutta and Contai, and decreases from east to west. Between that line and a line running through Rungpur, Mymensingh, and Kishoregunj, along the western flank of the Tipperah hills, and through Chandpur and Patuakhally, the average rainfall varies from 10 to 20 inches in amount. To the east of the latter line it exceeds 20 inches, and over the greater part of the Cooch Behar district, the Bhotan Duars and the Darjeeling hill district, and also in the Cox's Bazar district in South Chittagong, it exceeds 30 inches.

If the first day from which general monsoon rain occurred be accepted as the date of the commencement of the monsoon, the following give the dates for the Provinces for the present year :—

East Bengal ..	...	...	June 8th.
South-West Bengal ..	...	...	" 9th.
North Bengal ..	...	...	" 10th.
Orissa ..	...	...	" 10th.
Behar ..	...	...	" 14th.

The local distribution of rainfall for the month was very irregular. During the first week of the month, local showers were received in nearly every part of the Province. During the second week the monsoon current gave fairly general rain commencing from the east coast and advancing northwards and westwards. The depression which formed at this time gave very heavy rain during the third week over Orissa and the greater part of Chutia Nagpur and Behar. Light moderate rain also fell in Bengal. During the fourth week the second depression which formed passed over Orissa to which it gave heavy rain. Throughout the remainder of the Province rain fell almost daily as light showers, but the total amount in consequence of the indraught to the cyclonic draught was small.

The rainfall was less than 10 inches in amount over the north-western districts of Behar and Chutia Nagpur, and over a large part of Central Bengal, including the Moorsheadabad, Rajshahye, Pubna, Buxa, Nuddea, South Burdwan, the greater part of the Presidency Division, North Jessore, Dacca, and the western half of the Mymensing district. In Central Bengal there were three centres of very slight rainfall—Manickgunge in the Dacca district, Nattore in the Nuddea district, and Ranaghat and Bongong in the Krishnagur and Jessore districts. At each of these the rainfall was less than five inches in amount.

Rainfall exceeding 20 inches in amount occurred over the Noakhally, Chittagong, Cox's Bazar districts, and also in the Cooch Behar, Julpigoree, North Purneah, and North Bhagulpore districts.

The rainfall was in excess over the whole of Orissa, the greater part of Chutia Nagpur, and the whole of Behar (excepting the Chumparun, Bettiah, Gopalgunge, and Bhooboon districts, and part of the Sonthal Pergunas), the Julpigoree and Darjeeling districts. The excess exceeded 10 inches in the Behar, Muzafferpore, North Purneah and North Bhagulpore districts and the Darjeeling Hills, and also at Outtaok and Pooree and Chandali in Orissa. The excess was also over 10 inches along the north-east coast from Cox's Bazar to Noakhally.

The rainfall was in defect over the districts referred to above, and also over near the whole of Bengal. The deficiency exceeded five inches over the greater part of Bengal to the east and north of a line running through Dinagepore, Rampore Bauleah, Krishnagur,

Jessore, Midnapore, Chandbali, and Bhramanbariah. It exceeded 10 inches in part of the Cooch Behar and Rungpore districts, and the eastern half of the Mymensing district, including Mymensing and Kishoregunge.

The following table gives a summary of the rainfall and temperature data for the seven meteorological divisions of the Province:—

METEOROLOGICAL DISTRICT.	TEMPERATURE.						RAINFALL.							
	Highest observed during month.	Lowest observed during month.	Average for month.			Average mean of week above or below normal mean month.	Of month.			Rainy days in month.			Since 15th May.	
			Of highest of the month.	Of lowest of each day.	Of mean for each day.		Average.	Normal average.	Variation.	Average number in month.	Normal average number.	Variation.	Average.	Normal average.
Orissam	104.4	70.6	89.4	72.8	84.1	- 2.6	17.23	8.34	+ 6.89	14.8	11.3	+ 3.4	19.08	17.21
South-West Bengal	103.5	73.0	82.1	72.4	83.4	- 0.5	9.35	10.23	- 0.87	15.0	14.5	+ 0.5	11.01	13.06
East Bengal	102.7	73.0	84.9	77.2	80.7	- 0.8	19.78	19.79	- 0.01	20.0	19.8	+ 0.2	24.16	24.62
North Bengal	102.0	73.6	86.4	77.0	83.8	- 0.8	13.43	15.24	- 1.81	16.8	17.2	- 0.4	18.33	21.11
North Behar	105.2	72.3	91.0	77.0	83.8	- 0	13.14	8.46	+ 4.74	11.4	9.7	+ 1.7	14.06	6.83
South Behar	109.6	68.3	94.0	76.7	85.0	- 1.2	11.37	6.37	+ 4.90	12.0	9.9	+ 2.1	12.24	7.85
Chutia Nagpur	100.5	70.7	91.2	75.3	83.2	- 0.8	8.58	8.24	+ 0.34	14.1	14.6	- 0.4	10.00	9.88

Results of the Meteorological Observations taken at the Alipore Observatory from 8th to 14th July 1883.

Month.	Day.	Maximum in obs.	Number of hours of sunshine.	Mean pressure (barometer) at 55° Fahr.	TEMPERATURE				HYGROMETRY				WIND.		Rain.	WEATHER.
					Mean	Maximum.	10-22°.	Minimum.	Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	Prevailing direction.	Miles recorded.		
1883.		°		Inches.	°	°	°	°	°	Inches	°	%.			Inches.	
July	8th	152°5	9	29.524	83.0	88.7	10.0	78.7	79.7	0.971	78.3	86	SSE and SE by S ..	175	0.40	Cloudy, o, g, d, p.
"	9th	152.3	7	.554	83.8	89.3	11.6	77.7	79.9	.970	78.5	80	S and SSE ..	139	0.02	Chiefly cloudy.
"	10th	152.0	9	.584	84.1	90.0	11.8	78.7	80.4	.986	78.8	84	S and SE by S ..	78	0.11	Partially cloudy, o, g, p, t.
"	11th	151.5	12	.549	85.8	92.5	14.8	78.2	80.9	.990	78.9	81	S and E ..	54	Nil.	Chiefly cloudy, lr.
"	12th	144.3	Nil	.535	82.3	92.0	13.8	78.2	79.8	.987	78.8	89	SW, ENE and S ..	58	1.11	Cloudy, o, g, p, t.
"	13th	151.0	5	.524	83.9	88.1	9.4	78.7	79.3	.942	77.4	81	S, E and SE ..	166	0.19	Cloudy, o, g, d, p.
"	14th	143.6	2	.572	82.5	87.7	9.2	78.5	79.1	.948	77.0	85	ESE and SE ..	190	0.46	Cloudy o, d, p, g.

The mean pressure of the seven days ..

Inches.

29.547

The average pressure of the corresponding period for 24 years, S. G. Office ..

29.548

The total number of hours of sunshine of the seven days ...

Hours.

44

The mean temperature of the seven days ..

°.

83.6

The average temperature of the corresponding period for 24 years, S. G. Office ..

83.9

The extreme variation of temperature during the seven days ..

14.8

The maximum temperature during the seven days ..

92.5

The highest velocity of the wind in one hour during the seven days ..

Miles.

17

The highest pressure of the wind on one square foot during the seven days ..

lbs.

8

The mean relative humidity during the seven days ..

%

85

The average relative humidity of the corresponding period for 24 years, S. G. Office ..

85

The total fall of rain from 8th to 14th July 1883 ...

Inches.

2.35

The average fall of the corresponding period for 24 years, S. G. Office ..

2.50

The total fall from 1st January to 14th July 1883 ...

28.61

The average fall of the corresponding period for 24 years, S. G. Office ..

27.08

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, and from observations made at 6h, 10h, 16h, and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 86 formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The direction of the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

o overcast, g gloomy, d drizzling rain, p passing temporary showers, t thunder, lr lightning reflection.

JOHN ELIOT,

METEOROLOGICAL OFFICE, INDIA,
The 16th July 1883.

For Meteorological Reporter to the Government of India.

Meteorological Report of the Province of Bengal

METEOROLOGICAL DIVISION.			DISTRICT.	Representative station.	STATION OBSERVATIONS.													Average humidity at 10 A. M. for week.	Average cloud amount at 10 A. M. for week.
					AIR PRESSURE.			WIND.		TEMPERATURE.									
					Mean barometer height, 10 A. M.	Mean reduced to sea-level.	Variation from mean.	Prevailing direction.	Mean wind velocity miles per day.	Highest during week.	Lowest during week.	Mean maximum temperature.	Mean minimum temperature of week.	Mean daily temperature of week.	Variation from normal mean of week.	Mean 10 A. M. temperature.			
ORIGINAL.	Pooree	Gopalpore	29.506	29.556	—	V	223	85.6	77.8	83.3	79.7	81.4	—	83.0	84	6.4			
	False Point	False Point	513	535	—104	Variable	219	80.5	76.6	87.4	78.5	83.0	—1.9	85.3	83	7.3			
	Cuttack	Cuttack	402	543	—006	Variable	58	93.4	78.3	89.2	78.4	83.8	—0.5	85.7	77	8.4			
	Balasore	Balasore	494	553	—	Variable	72	92.1	74.3	88.1	76.2	83.2	—	85.1	80	7.0			
	South-West Midnapore	Saugor Island	544	574	—047	Variable	202	92.2	77.0	89.2	79.3	84.2	+0.7	84.6	84	8.9			
	South 24-Pargunnahs	Midnapore	440	563	—	SE	†	93.5	77.2	80.1	77.8	83.5	—	85.5	80	7.1			
	Howrah	Calcutta	506	588	—016	SE	147	92.1	77.7	80.8	78.5	84.2	+0.7	84.9	80	8.4			
	Hooghly	Hurdwan	503	603	—007	E	89	94.6	78.4	91.3	79.0	85.2	+0.3	83.0	77	8.9			
	Burdwan	Burdwan	503	603	—007	E	89	94.6	78.4	91.3	79.0	85.2	+0.3	83.0	77	8.9			
	Bankura	Ranigunj	233	—	—	NE	†	93.5	77.8	89.1	78.7	83.0	—	81.0	73	5.1			
SOUTH-WEST BENGAL.	Bearbhoom	Bearbhoom	233	—	—	NE	†	93.5	77.8	89.1	78.7	83.0	—	81.0	73	5.1			
	West Burdwan	Berhampore	561	627	+016	E	121.2	93.7	77.3	90.1	78.5	84.5	—0.6	83.6	84	9.1			
	Moorshedabad	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Nudda	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Jessore	Jessore	576	613	+009	SE	139.3	94.6	77.2	90.5	78.8	84.5	0.0	84.2	84	6.6			
	Khoolna	Chittagong	569	658	—028	SE	110	88.1	78.0	87.1	78.9	82.0	+0.2	83.6	82	8.4			
	Chittagong	Chittagong	569	658	—028	SE	110	88.1	78.0	87.1	78.9	82.0	+0.2	83.6	82	8.4			
	Chittagong Hill Tracts	Demagiri	Observatory not started.								81	5.1		
	Backergunj	Barrisal	500	—	—	V	207.7	91.6	77.8	88.4	79.3	83.8	—	84.7	81	5.1			
	Noakholly	Noakholly	Not commenced.								79	5.3		
EAST BENGAL.	Furzedpore	Furzedpore	525.9	—	—	SE	174.6	91.5	76.9	87.9	78.4	83.2	—	85.1	79	5.3			
	Dacca	Dacca	592	627	—022	SE	99	93.8	75.0	90.7	79.0	84.9	+0.7	87.8	77	7.3			
	Commillah	Commillah	596	631	—	SE	†	87.6	78.8	81.2	77.0	80.9	—	84.7	75	8.0			
	Mymensingh	Mymensingh	591	—	—	E	150	94.3	77.5	90.7	78.0	84.8	—	84.3	82	9.1			
	Bogra and Pubna	Serajunj	Not commenced.								81	5.0		
	Rajahmhye	Rampore Beaulah	523	597	—	NW	161	95.1	77.8	91.2	78.7	85.0	—	84.0	81	5.0			
	Dinapore	Dinapore	489	—	—	NE	141	97.6	78.1	92.7	79.5	80.1	—	89.1	68	5.7			
	Rungpore	Rungpore	616	—	—	SE	110	97.8	74.6	93.7	78.7	80.2	—	80.8	76	5.7			
	Jalpigoree	Jalpigoree	531	—	—	?	113	96.9	77.1	91.4	79.5	84.8	—	85.4	82	5.4			
	Cooch Behar	Darjeeling	22.927	—	—	E	58	70.6	50.1	68.5	57.2	62.9	—	65.3	80	7.4			
NORTH BENGAL.	Darjeeling Hill Districts	Darjeeling	22.927	—	—	E	58	70.6	50.1	68.5	57.2	62.9	—	65.3	80	7.4			
	Shahabad	Dehree	29.241	590	—	Variable	†	97.5	70.0	90.5	73.1	81.9	—	89.2	71	5.5			
	Huxar	Huxar	344	543	—	NE	172	101.9	79.7	94.5	81.1	87.8	—	90.7	64	3.9			
	Gya	Gya	501	573	—062	E	58	99.2	74.8	93.3	76.6	85.0	—0.6	89.9	67	7.5			
	Patna	Bankipore	417	598	+008	E	137	100.0	80.7	94.0	83.0	88.0	+1.7	89.0	70	7.1			
	South Bhagulpore	Bhagulpore	448	590	—	SE	103	98.9	70.0	93.9	79.9	86.9	—	88.8	71	3.3			
	Moughyr	Doomka	113	—	—	SE	—	93.1	75.6	90.1	76.8	83.5	—	84.2	89	5.1			
	Bonthal Pergunnahs	Doomka	113	—	—	SE	—	93.1	75.6	90.1	76.8	83.5	—	84.2	89	5.1			
	Purneah	Purneah	479	604	—005	E	41	96.2	78.8	93.5	80.0	86.7	+2.1	88.0	73	7.9			
	North Bhagulpore	Purneah	479	604	—005	E	41	96.2	78.8	93.5	80.0	86.7	+2.1	88.0	73	7.9			
NORTH BENGAL.	Mosufferpore	Durbhunga	443	597	+019	ESE	127	96.4	79.0	92.1	81.1	86.6	+1.9	84.5	76	5.3			
	Durbhunga	Motihari	—	—	—	E	—	97.1	78.5	92.7	79.6	86.2	—	90.1	69	1.0			
	Chumpanan	Chupra	405	—	—	E	41	95.5	77.0	94.1	81.1	87.6	—	89.3	62	5.7			
	Sarun	Chupra	405	—	—	E	41	95.5	77.0	94.1	81.1	87.6	—	89.3	62	5.7			
	Hazaribagh	Hazaribagh	27.003	29.579	—003	E	189	97.5	75.0	94.7	74.2	79.5	—0.3	81.6	77	5.4			
	Lohardugga	Ranchoo	Not commenced.									
	Manbhoom	Not commenced.									
	Singhbhoom	Chybasa	Not commenced.									

Explanation of Summary.—The normal means of air pressure and temperature are the arithmetical averages or means of the readings during the same time. The humidity of the atmosphere is expressed as a percentage, saturated air being represented by 100. A clear sky is denoted by 0 and an overcast sky by 100. The normal means of the numerical means or averages of the rainfall in that district determined from the returns sent in by the sub-divisions, rainfall, the normal means are the numerical means or averages of the rainfall in that district determined from the returns sent in by the sub-divisions from that district, (i.e.) the total rainfall at the sub-divisional stations in the district sending in returns divided by the number of stations. A rainy day is denoted by 1. (a) Observations commenced on the 1st July.

for the week ending 13th July 1883.

Rainfall of week at observing station.	DISTRICT OBSERVATIONS.										Representative station.	DISTRICT.	METEOROLOGICAL DIVISION.
	RAINFALL.												
	Of week.		Since 1st of month.			Since 1st May.			Average number of rainy days during the week.	Normal number of rainy days of week.			
	Normal mean for district.	Average for district.	Mean for district.	Normal mean.	Variation.	Mean for district.	Normal mean.	Variation.					
0'25											Gopalpore	ORISSA.	
3'31	2'43	3'56	3'34	4'50	+3'34	25'00	15'00	+10'51	5'7	4'2	False Point		
1'98	2'61	4'07	3'77	5'01	+1'76	23'73	15'57	+8'16	4'0	3'8	Cuttack		
3'08	2'45	3'94	3'82	5'51	+1'31	21'71	15'26	+6'45	5'2	4'0	Balasore		
3'65	3'33	3'23	7'93	6'26	+1'67	19'70	18'67	+1'17	4'0	4'5	Saugor Island		
0'63	3'08	1'21	2'76	5'54	-2'78	10'03	17'58	-6'55	2'0	3'9	Midnapore	South-West Midnapore	
												South 24-Pergunnahs	
												24-Pergunnahs	
1'92	2'37	0'86	3'04	4'46	-0'53	14'05	17'30	-2'44	5'1	4'9	Calcutta	Howrah	
												Hooghly	
0'92	1'99	0'85	1'44	3'86	-2'42	14'47	15'16	-0'69	4'3	3'8	Burdwan	Burdwan	
												Bankoora	
0'96	2'05	0'86	2'70	4'91	+2'21	18'39	17'49	+0'90	3'4	4'5	Ranigunj	Heerbhoom	
												West Burdwan	
0'63	2'44	0'34	1'33	5'04	-3'71	15'13	16'91	-1'78	1'7	4'2	Herhampore	Mooredhabad	
	2'40	0'74	2'01	4'73	-2'72	13'44	18'40	-4'96	3'0	4'0		Nuddea	
0'79	2'06	1'12	3'02	4'83	-1'81	14'44	20'65	-6'21	3'7	4'7	Jessore	Jessore	
												Khoolna	
1'54	6'29	2'00	3'39	11'01	-7'42	50'50	45'77	+10'79	6'0	5'0	Chittagong	Chittagong	
	3'19	1'23	2'32	5'77	-3'45	23'09	20'27	-2'18	6'0	5'6	Demagri	Chittagong Hill Tracts	
1'52	3'64	1'79	2'33	7'10	-4'27	22'51	22'24	-0'73	5'0	5'9	Barrisal	Backergunj	
	3'04	3'01	4'43	8'84	-4'41	47'90	42'77	+5'13	5'0	5'8	Noakholly	Noakholly	
0'36	2'39	1'21	1'65	4'83	-3'17	13'53	22'33	-8'80	4'7	4'8	Furreedpore	Furreedpore	
1'05	2'77	1'85	2'63	5'03	-2'41	13'59	23'31	-9'62	4'3	4'6	Dacca	Dacca	
2'56	2'87	3'33	5'21	5'43	-0'22	20'63	25'08	-1'40	4'6	5'0	Commillah	Commillah	
1'51	3'48	1'09	1'66	6'00	-4'33	15'29	23'35	-13'06	2'3	4'6	Mymensingh	Mymensingh	
	2'59	1'11	1'74	5'24	-3'50	15'74	21'64	-5'90	2'7	4'0	Serajgunj	Bogra and Pubna	
0'50	2'36	0'59	1'33	5'79	-4'46	14'02	10'26	-3'24	2'3	4'3	Rampore Beaulah	Rajshahye	
0'21	2'71	0'23	0'61	5'40	-4'88	14'09	24'35	-9'36	1'6	4'1	Dinagore	Dinagore	
0'38	4'24	0'50	1'17	7'14	-5'97	17'56	26'33	-18'77	2'0	3'7	Rungpore	Rungpore	
1'09	3'91	0'63	1'25	7'44	-6'19	32'66	49'57	-17'31	3'3	4'7	Julpigoree	Julpigoree	
												Cooch Behar	
2'01	10'31	1'78	4'17	19'76	-15'59	58'23	64'71	-6'48	5'7	6'0	Darjeeling	Darjeeling Hill Districts	
1'36											Dohree	Shahabad	
-	2'59	0'15	1'77	4'73	-2'96	9'76	10'68	-0'92	0'8	3'9	Buzar		
-	2'35	0'10	2'58	4'78	-2'20	13'89	11'87	+2'33	0'7	3'5	Gya	Gya	
	2'48	0'35	1'65	5'14	-3'29	16'49	12'45	+4'04	1'3	3'6	Bankipore	Patna	
0'13	2'31	0'35	1'07	4'39	-3'73	12'84	12'95	-0'11	1'6	4'3	Bhagulpore	South Bhagulpore	
												Monghyr	
0'23	2'08	0'71	1'70	5'44	-3'74	16'06	16'50	-1'43	2'3	4'3	Doomka	Southal Pergunnahs	
0'15	2'85	0'20	1'87	6'05	-4'21	20'02	19'49	+0'53	1'3	4'1	Purneah	Purneah	
												North Bhagulpore	
0'14	2'72	0'37	1'33	5'21	-3'99	15'25	13'73	+1'52	0'8	3'3	Durbhunga	Mosufferpore	
												Durbhunga	
	2'32	0'03	3'69	5'51	-1'63	10'05	15'57	-5'32	0'3	3'1	Motihari	Chumpanun	
0'01	2'84	0'21	2'95	4'85	-1'90	12'31	12'36	+0'45	0'5	3'6	Onupra	Barun	
3'42	5'09	2'10	5'39	5'31	-0'12	13'03	15'43	-2'39	3'7	4'9	Hazaribagh	Hazaribagh	
												Lohardugga	
	2'96	1'78	5'99	5'10	+0'89	16'33	14'33	+2'00	4'0	4'7	Ranchee	Manbhoom	
	2'31	2'96	0'12	4'31	+1'81	15'67	16'50	-2'53	4'0	4'9	Chyebassa	Singubhoom	

period for the past 12 years. The variations are negatives when the mean for the week is less than the corresponding normal mean and positive when greater. The number denoting cloud amount represents the part of the sky covered, the whole sky being denoted by 10. Under the head "district observations" for the period in question during the past 12 years. The "means for the district" are the numerical averages of the rainfall returns received day is one on which at least an hundredth of an inch fell.

Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 13th of July 1883.

Meteorological division.	District.	Station.	RAINFALL.								Total.		Total rain- fall from 1st to 13th July.	Average total rain- fall from 1st to 13th July.	Total rain- fall since 15th May.	Average rainfall from 15th May to date.
			Saturday, 7th July.	Sunday, 8th July.	Monday, 9th July.	Tuesday, 10th July.	Wednesday, 11th July.	Thursday, 12th July.	Friday, 13th July.	Number of rainy days.	of Rainfall week.					
CHITRA	Purree	Purree	0.40	0.11	0.07	0.00	0.48	1.76	6	3.43	8.82	3.34	27.71	12.40	
		Khurdah	1.00	0.63	0.04	1.00	0.06	0.17	6	4.00	9.02	4.08	28.87	16.35	
		Banpur	0.47	1.00	4.08	11.85	
		False Point	1.10	0.20	0.37	0.38	1.07	5	3.24	7.63	5.24	23.15	16.70	
		Hookitola	0.20	P	P	
	Cuttack	Jagatsinghpore	0.70	1.50	0.50	3	2.70	6.73	3.01	12.23	12.23	
		Banki	2.00	1.1	0.16	P	P	
		Outback	1.55	0.12	1.04	0.06	0.10	1.09	6	4.04	6.87	6.33	34.63	16.85	
		Kendrapara	0.03	1.00	1.70	3	3.33	4.43	4.37	21.45	14.57	
		Jajpore	3.30	0.40	1.36	0.53	4	5.01	9.08	6.38	26.33	18.57	
	Balasore	Chandball	0.25	1.10	0.10	0.76	2.57	5	4.38	7.29	6.41	31.40	12.44	
		Bludruck	0.12	0.42	1.00	0.32	4	2.60	5.33	6.13	23.00	10.77	
		Borah	0.25	0.35	0.40	2.10	0.40	0.40	6	3.00	6.74	4.74	23.02	13.76	
		Walsore	0.30	0.38	0.09	2.00	0.55	5	3.81	5.87	5.83	27.24	13.70	
		Jekisore	0.48	0.07	0.00	0.00	0.56	0.30	0.37	7	4.04	6.18	6.18	15.98	15.98	
	Midnapore	Baripadah	2.14	0.59	0.02	1.50	4	4.25	6.37	5.82	10.96	
SOUTH-WEST BENGAL		Contal	0.20	0.14	0.10	3.41	0.21	5	4.11	9.15	5.76	24.03	17.48	
	Saugur Island	0.41	0.35	.....	.....	.....	2.09	0.28	4	4.03	9.11	6.13	22.07	18.98
	Tumlook	.....	.....	.....	.....	.....	1.00	.....	1	1.00	3.10	4.04	11.50	15.73
	Midnapore	0.13	0.02	0.00	.....	.....	0.16	0.34	2	0.41	2.45	4.93	10.15	16.74
	Ghatal	0.20	.....	0.45	.....	.....	.....	0.77	3	1.42	2.77	7.04	11.15	20.30
24 Pargunnahs	Diamond Har- bour.	0.51	.....	0.11	.....	.....	0.92	.....	3	1.54	5.53	6.56	12.37	29.57
	Alipore Jail	0.12	0.45	0.08	0.03	0.08	0.00	0.13	7	1.49	4.83	4.83	14.74	17.83		
	Barackpore	.....	0.40	.....	.....	.....	0.10	.....	2	0.50	3.01	3.90	14.45	17.63
	Dum-Dum	0.15	0.40	0.20	0.00	.....	0.00	0.02	6	1.22	6.00	3.67	16.72	17.20	
	Barasat	0.04	0.03	0.11	0.01	.....	0.00	.....	5	0.24	3.83	3.71	14.07	16.75
Howrah	Buseerhat	0.04	0.24	0.41	.....	.....	0.70	0.02	5	1.41	5.38	4.57	20.98	19.43
	Howrah	0.10	0.47	.....	0.02	0.31	0.41	0.04	6	1.25	3.90	4.62	18.85	17.23	
Hooghly	Mohensaka	0.12	0.24	0.10	0.03	.....	0.09	0.03	6	0.61	3.90	5.30	12.80	8.33	
	Serampore	0.13	0.42	0.03	0.00	0.04	0.05	0.01	7	0.74	2.09	4.07	14.41	16.21		
Hooghly	Hooghly	0.05	0.20	.....	.....	0.05	.....	0.25	4	0.41	2.41	3.77	13.39	15.76
	Jehanabad	0.00	.....	.....	0.07	0.01	.....	.....	3	0.45	2.05	0.78	12.87	18.53
Burdwan	Culina	0.13	0.15	0.05	.....	.....	.....	0.85	4	1.18	2.10	4.00	14.05	24.70
	Burdwan	0.17	0.22	0.07	0.05	.....	0.10	0.14	6	1.04	1.24	3.88	16.27	15.17	
	Cutwa	0.06	.....	0.25	.....	.....	0.01	.....	3	0.34	0.92	3.72	13.12	15.61
Ranagunge	Ranagunge	.....	.....	0.40	0.23	.....	.....	.....	.....	.....	.....	4.51	.....	14.12
	Bankura	0.21	0.07	0.15	.....	.....	.....	.....	3	0.43	3.84	4.07	11.22	10.79
Bankura	Bishnupore	.....	.....	.....	.....	.....	0.33	.....	1	0.33	1.71	5.20	10.20	10.20
	Mahara	0.30	0.18	0.10	.....	.....	0.18	.....	4	0.84	2.42	5.07	10.22	17.12
Bankura	Khatra	0.18	0.16	0.14	.....	.....	.....	.....	.....	.....	.....	4.84	.....	14.75
	Bankura	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Beerbhoom	Bh. Soory	0.00	0.07	0.14	.....	.....	0.20	0.47	5	2.03	4.73	8.31	27.40	17.53
	Hetampore	0.15	0.21	0.31	.....	.....	0.30	.....	4	0.71	1.58	4.17	18.20	18.83
Nadua	Bongong	.....	.....	0.08	.....	.....	0.10	.....	.....	.....	.....	4.95	.....	10.15
	Ranaghat	.....	0.15	0.05	.....	.....	0.24	0.24	4	0.71	3.07	4.32	16.01	16.97
	Kishinagar	0.00	0.01	.....	.....	.....	0.07	.....	3	0.20	0.40	4.08	6.00	15.95
	Chowadanga	.....	.....	0.32	.....	.....	0.11	.....	2	0.41	1.13	5.12	8.02	18.57
	Meherpore	0.15	.....	.....	.....	.....	0.21	.....	2	0.30	2.08	4.42	15.12	17.34
Koochibeda	Koochibeda	.....	0.00	0.14	.....	.....	1.70	0.02	4	2.01	2.00	4.86	20.33	20.44
	Koochibeda	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Khoolna	Satkira	0.21	.....	.....	.....	.....	0.35	0.07	3	0.63	6.48	6.48	21.21	20.21
	Baghat	0.15	.....	0.31	.....	.....	.....	.....	.....	.....	.....	5.40	23.81	23.81
	Khoolna	0.16	.....	0.13	.....	.....	0.08	0.41	4	0.77	3.61	6.44	16.02	20.02
Jessore	Narail	.....	0.12	0.53	.....	.....	1.00	0.16	4	2.41	2.73	8.13	14.03	18.07
	Jessore	0.11	0.05	0.09	.....	.....	0.44	.....	4	0.60	1.93	4.02	10.82	21.17
	Jhemdah	0.10	0.30	0.11	.....	.....	0.40	0.03	5	1.08	2.03	4.13	12.93	21.01
	Magorah	.....	.....	.....	.....	.....	0.25	0.00	3	1.15	3.34	4.03	16.08	19.73
Mooredahad	Kandi	.....	0.05	.....	.....	.....	0.27	.....	2	0.32	1.52	5.30	14.95	18.20
	Rampore Haut	.....	.....	0.35	.....	.....	0.09	.....	3	0.44	1.86	4.00	18.44	15.80
	Herampur	.....	.....	0.33	0.04	.....	0.11	.....	3	0.48	1.51	5.09	15.34	17.09
	Lalbagh	.....	.....	0.21	.....	.....	0.24	.....	2	0.45	1.24	4.30	12.50	14.05
	Azamungo	.....	0.06	.....	.....	.....	0.06	.....	2	0.12	0.30	4.38	15.12	17.76
	Jungpore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10.07	16.57
	Lalgola	.....	0.00	.....	.....	.....	.....	.....	1	0.00	0.54	0.00	12.83	17.15
EAST BENGAL	Chittagong	Cox's Bazar	0.05	0.10	0.40	0.03	0.43	0.28	6	1.32	3.73	14.57	60.25	85.04	
		Chittagong	0.35	0.09	0.01	0.34	0.20	0.53	6	2.08	3.64	7.14	80.39	35.63	
	Chittagong Hill Tracts.	Rangmati	0.13	0.11	0.04	0.42	0.07	0.45	6	1.23	3.77	6.41	24.26	30.07	
		Ruma	0.25	4.71	27.67	27.67	
	Chittagong	Agartala	0.10	0.00	0.30	1.08	4	3.18	5.50	6.44	24.43	23.44	
		Chittagong	
	Backergunge	Patuakhali	0.37	0.05	1.10	0.16	4	1.67	8.23	9.04	24.07	37.91	
		Perazepore	0.13	0.45	0.18	0.10	0.53	5	1.44	5.36	6.41	20.23	28.70	
		Burisal	0.03	0.40	0.30	0.18	0.18	1.07	5	1.98	2.47	0.07	20.10	27.37	
		Bhola	0.27	0.04	0.40	0.40	0.26	0.71	6	3.08	3.33	6.86	25.00	36.91	
	Noakhally	Noakhally	0.20	0.08	0.03	0.00	0.87	0.84	6	3.81	5.83	8.82	47.38	41.74	
		Fenny	0.02	0.23	0.19	0.90	4	2.20	3.03	8.86	47.53	43.73	
	Furreedpore	Madaripore	0.19	0.03	0.17	0.21	0.70	0.45	7	2.70	3.05	4.07	18.20	22.88	
		Furreedpore	0.08	0.14	0.12	0.17	5	0.51	0.57	5.07	23.15	23.15	
		Goulundo	0.05	0.13	0.50	0.06	4	0.54	1.08	6.41	14.32	20.64	
	Dacca	Munshigunge	0.04	0.10	0.06	1.10	4	1.59	2.33	6.08	27.99	
		Dacca	0.01	0.09	0.05	0.42	1.01	5	1.50	2.41	6.41	13.91	23.08	
		Narainkunge	0.02	0.03	0.09	0.49	1.30	5	2.01	P	P	
		Manickgunge	0.07	0.77	1.61	3	2.40	3.80	6.61	11.74	18.65	
	Comilla	Comilla	0.03	0.02	0.42	2.14	4	2.61	4.05	5.55	28.33	20.30	
		Chandpore	0.20	1.25	0.10	1.75	2.60	5	5.80	7.30	6.73	20.45	32.35	
	Mymensingh	Bratmanueria	0.13	0.08	0.09	0.06	1.85	5	1.71	5.95	6.28	10.98	25.05	25.05	
Mymensingh	Kishoregunge	.....	.....	.....	.....	.....	.....	0.73	1	0.73	1.40	5.35	16.10	30.61
	Atia	.....	.....	0.34	.....	.....	0.03	1.12	3	1.44	1.70	4.30	17.10	22.43
	Mymensingh	0.00														

Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 13th of July 1883—concluded.

Meteorological division.	District.	Station.	RAINFALL.							TOTAL.		Total rainfall from 1st to 13th July.	Average total rainfall from 1st to 13th July.	Total rainfall since 18th May.	Average rainfall from 15th May to date.
			Saturday, 7th July.	Sunday, 8th July.	Monday, 9th July.	Tuesday, 10th July.	Wednesday, 11th July.	Thursday, 12th July.	Friday, 13th July.	Number of rainy days.	of Rainfall week.				
NORTH BENGAL	Pubna	Pubna	0.11	0.06	0.11		1.82			4	2.10	3.00	6.48	15.06	19.80
		Sarsung		0.42				0.60		2	1.02	1.27	6.96	17.40	20.25
	Bogra	Rhapora		0.35				1.10		2	1.45	3.01	5.18	11.17	23.49
		Nawahilla		0.45	0.03			0.45		2	0.24	0.41	4.55	9.63	21.18
		Bogra			0.06			0.31		2	0.31	2.05	0.82	12.43	25.99
		Panchtibi		0.20				0.10		2	0.30	0.77	6.94	12.97	23.18
	Rajshahye	Banuloh		0.35	0.19		0.05			3	0.59	1.53	5.83	11.14	18.54
		Natore						0.40		1	0.40	1.90	6.14	11.25	20.33
	Maldah	Maldah		0.06			0.04	0.09		3	0.79	0.63	5.89	12.83	18.94
		Mohadepore		0.25				0.20		2	0.45	1.40	5.30	10.46	26.28
	Dinapore	Churnon			0.06					1	Nil	0.20	5.33	13.92	20.92
		Raisung		0.30	0.06			0.02		3	0.38	0.54	5.15	14.72	24.66
		Dinapore		0.01	0.23			0.04		2	0.25	0.82	6.23	10.49	27.43
		Balorhat								—	—	0.43	?	.....	?
	Rangpore	Bhawungu		0.14						2	0.30	2.00	5.20	23.65	25.85
		Rangpo		0.02				0.16		2	0.80	0.84	5.40	13.97	35.77
		Korigram								—	—	7.23	7.23	38.80	38.80
		Bagnogra						0.11	0.28	2	0.39	0.39	6.05	23.83	44.73
	Julpigore	Julpigore	0.03	0.07	0.12	0.44	0.65		0.06	6	1.34	3.25	11.03	44.40	47.63
		Cooch Behar		0.19	0.34					3	0.53	0.46	3.88	24.63	46.04
	Cooch Behar	Dinhat		0.12	0.05	0.25				3	0.42	0.47	10.76	35.37	55.53
		Dinhat		0.02	0.03	0.16				3	0.21	0.21	4.67	31.96	46.63
		Matabhanga		0.02	0.00					2	0.62	1.38	5.96	41.93	51.89
		Buza	1.92		0.40	4.46				4	1.79	4.35	25.85	87.95	87.95
	Darjeeling Hill.	Bilguri	1.30	0.02	0.02	0.43				4	1.79	4.35	25.85	87.95	87.95
		Darjeeling		1.16	0.50	0.25				3	1.93	5.93	13.89	46.70	44.48
		Kalimpong	0.07	1.00		0.53		0.03		4	1.63	5.23	13.89	46.70	44.48
										—	—				
NORTH BENGAL	Purneah	Kimsungu				1.06			0.25	2	0.31	3.04	8.04	28.45	26.74
		Arruah						0.20		1	0.22	1.14	6.27	20.02	23.33
		Purneah		0.04					0.45	2	0.49	1.79	5.13	13.13	29.27
	North Bhagulpore.	Maddapore							0.25	1	0.25	2.44	5.48	20.67	14.61
		Soupol								—	Nil	0.07	5.46	24.07	16.37
	Durbhunga	Tajpore						0.09		1	0.08	1.49	5.06	16.39	13.16
		Durbhunga			0.19			0.40		2	0.59	0.84	6.14	12.18	14.68
		Madhubani								—	Nil	1.71	4.86	17.78	14.67
	Mouafferpore	Sitamarhi								—	Nil	2.04	5.17	10.05	14.68
		Mouafferpore						0.34		1	0.34	1.16	5.07	22.03	13.43
		Hajipore						0.04		1	0.04	0.63	4.63	18.45	11.78
	Ohuapara	Mothari								—	Nil	4.80	4.68	11.71	14.47
		Bettiah	0.10							1	0.10	5.37	6.39	11.34	17.11
		Gopikungu								—	Nil	0.90	5.53	7.11	14.31
		Sewan						0.42		1	0.42	1.82	5.11	9.78	13.73
SOUTH BENGAL	Shahabad	Chuprah								—	Nil	3.92	4.69	15.84	10.99
		Buxar						0.04		1	0.04	1.57	4.78	9.43	10.91
		Dehree	0.06					0.58		2	0.64	4.25	5.89	8.90	11.19
		Rhubonab						0.09		1	0.09	0.60	5.06	10.21	10.35
	Gya	Kasaram								—	Nil	1.77	4.91	13.43	11.27
		Arrah								—	Nil	0.67	4.69	13.43	11.27
		Aurangabad								—	Nil	3.04	4.88	18.04	11.06
		Gya								—	Nil	4.20	4.20	11.60	11.60
	Patna	Nowadah			0.11		0.18			2	0.29	5.11	5.37	12.75	12.75
		Jehanabad								—	Nil	2.10	4.71	13.43	10.91
		Patna						0.57		1	0.57	1.33	4.85	16.31	12.70
		Dinapore						0.10		1	0.10	1.40	4.07	12.50	12.10
	Monghyr	Behar	0.24	0.04						2	0.28	3.24	5.51	20.29	17.88
		Barth			0.06					1	0.03	1.38	5.83	15.62	13.03
		Begowara						0.09		1	0.09	1.39	4.73	22.09	11.28
		Monghyr		0.14	0.03			0.11		3	0.28	0.39	5.23	13.31	13.31
	South Bhagulpore.	Jamui			0.02			0.12		2	1.04	1.30	4.83	5.21	13.99
		Bhagulpore		0.15						1	0.15	0.26	4.29	15.67	12.63
		Banka			0.21					1	0.21	1.99	4.83	7.76	15.60
		Rajmahal			0.33			0.55		2	0.88	0.88	6.64	9.84	19.26
CENTRAL NAGPORA.	Sonthal Pergunnah.	Gouda			0.15					1	0.15	2.13	4.05	5.40	15.67
		Pakour		0.28	0.16					2	0.44	1.00	4.05	21.78	18.46
		Nya Dookha	0.08	0.00	0.05	0.02		0.04		6	0.63	2.15	4.09	17.44	16.12
		Dooghur	0.09	0.11				0.30		3	0.49	1.87	5.00	16.02	16.27
	Hasaribagh	Jamtara	0.21	0.15	0.27	0.10		0.04		5	1.47	2.26	4.83	15.63	15.15
		Pachamba	0.17	0.40	0.45	0.03				5	2.49	3.37	5.39	11.79	15.60
		Hasaribagh	1.47	0.13	1.35					3	2.94	7.39	5.52	16.90	13.73
		Sentaguri	0.15		0.71		0.13			3	0.99	2.93	6.13	17.40	17.40
	Lohardugga	Mahudi Hills	1.04	0.27						—	—		6.00	14.72	14.72
		Ranchi	1.90	0.33	0.23	0.40		0.55	0.40	6	3.88	9.06	4.84	24.73	14.27
		Palamow	0.99	0.07		0.20				3	1.35		5.17		12.38
										—	—				
	Singbhoom	Chyabassam	1.52	0.53	0.79				0.13	4	2.98	6.12	4.81	15.67	15.03
										—	—				
	Manbhoom	Parulia	0.60	0.19	0.28			0.13		4	1.26	7.25	5.09	22.76	15.11
		Gobindpore	0.40	0.09	0.08					3	0.63	1.89	5.29	10.71	14.85

Explanation. Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If some of the returns are wanting, the corresponding spaces in the total rainfall columns are left blank.

**SUMMARY OF METEOROLOGICAL AND RAINFALL OBSERVATIONS
TAKEN IN BENGAL FOR THE WEEK ENDING FRIDAY, 13TH JULY 1883.**

It was stated in last week's report that a feeble cyclonic vortex had formed at the head of the Bay, and advanced slowly westwards during the latter part of the week. The centre was approaching and near to the Orissa coast at the end of last week. It crossed the Balasore coast late on Saturday evening and advanced over the North Orissa hills into the Central Provinces, where it apparently broke up on Monday after having given moderately heavy rain to South-West Bengal, Orissa, Chutia Nagpur, and the northern districts of the Central Provinces. The southerly winds which were established over Bengal on Saturday and Sunday, with the passage of the vortex across the Orissa coast, gave frequent light to moderate showers over the greater part of the Province. On Tuesday morning a rapid fall of the barometer at the stations on the east coast of the Bay, and a shift of wind at Akyab to north-east, indicated the commencement of the formation of another cyclonic vortex. It developed slowly on Wednesday, and commenced to move westwards on Thursday morning, advancing along a path some distance to the south of that of the two preceding vortices. Northerly winds set in over the north-west coast of the Bay on Wednesday morning, and gradually extended inland. The suspension of the southerly winds at this time, and the indraught from the north to the vortex, diminished humidity, and partially cleared the sky from cloud in North Bengal and Behar. Temperature also increased rapidly, and unusually high maximum day temperatures were registered in North Bengal and Behar, more especially on Thursday, after which temperature began to diminish. The westward advance of the vortex on that day began to give overcast skies and moderate rain to South Bengal and Orissa. The cloud amount increased considerably over the whole Province on Friday, and rain fell in every division. The vortex crossed the coast to the south of False Point near Gopalpore on Friday evening, when southerly winds were again established over the Province. They are now giving fairly general rain, more especially in East and North Bengal.

In consequence of the peculiar meteorological features of the week, little rain fell in Behar and North Bengal. Over the whole of that area the weather was that which is usually associated with a short break in the rains.

The variations from the normal conditions during the past week have been large. The average pressure was generally below the normal by small amounts except at the Orissa stations, where pressure was very low as contrasted with the remainder of the Province, in consequence of the passage across it of two cyclonic vortices. The deficiency at False Point was a tenth of an inch. Temperature was above the average except in Orissa. This was most marked in Behar and North Bengal, for which the mean temperature of the week was probably 2° above the normal. Winds varied considerably in force during the week, but were normal in direction except in South-West Bengal and Orissa, where they shifted with the position of the vortices. The sky has been on the average more than half covered with cloud except at Buxar, Motahari, and Chuprah, the most westerly stations in Behar, and at Bhagulpore.

The following table gives the usual summary of the temperature and rainfall data for each of the seven meteorological divisions of the Province:—

Week ending 13th July 1883.

METEOROLOGICAL DISTRICT.	TEMPERATURE							RAINFALL.									
	Highest observed during week.	Lowest observed during week.	Average for week.				Average mean of week above or below normal mean week.	Of week.			Rainy days.			Since 1st of month.		Since May 1st.	
			Of highest of each day.	Of lowest of each day.	Of mean for each day.	Average.		Normal average.	Variation.	Average number in week.	Normal average number.	Variation.	Average.	Normal average.	Average.	Normal average.	
Orissa	93.4	74.3	87.0	78.7	82.8	- 1.2	3.89	2.63	+ 0.96	4.9	4.0	+ 0.9	6.04	5.07	25.06	16.26	
South-West Bengal	94.9	77.0	85.9	79.6	84.3	+ 0.0	0.99	2.66	- 1.67	3.5	4.4	- 0.9	2.99	4.79	17.18	17.68	
East Bengal	94.3	75.0	85.2	78.1	83.2	+ 0.4	2.18	3.50	- 1.32	4.0	5.1	- 0.5	5.30	6.28	25.80	26.45	
North Bengal	97.8	74.8	86.3	79.1	85.6		0.59	3.94	- 2.70	2.4	4.8	- 1.9	1.28	6.32	21.40	30.56	
North Behar	101.9	74.8	93.2	78.5	85.9	+ 0.6	0.00	3.86	- 2.66	0.8	3.6	- 2.8	3.13	5.64	19.62	13.01	
South Behar	98.2	77.0	88.1	80.5	84.8	+ 2.0	0.87	2.59	- 2.22	1.6	4.0	- 2.4	1.77	8.00	12.48	14.82	
Chutia Nagpur	87.6	73.0	84.7	74.3	79.8	- 0.3	2.06	2.94	- 0.89	3.9	4.8	- 0.9	5.39	6.20	16.00	16.38	

The preceding table shows that Orissa is the only division which received abundant rain. In Chutia Nagpur and East Bengal the rainfall was slightly in defect. Over the rest of the Province the rainfall was very small in amount. In North Bengal and Behar it occurred merely as local and light showers, which on the average gave from 10 to 20 per cent. of the normal rainfall for the week. Over the same area the average number of rainy days during the week was only half, as contrasted with the normal number 3. Hence an almost complete break in the rains prevailed in that part of the Province during the week.

Saturday, 7th July.—Pressure fell rapidly in Orissa, and to a less extent in Chutia Nagpur and the adjacent districts of South-West Bengal. It increased over the remainder of the Province, the rise being largest in North Bengal. The rapid fall in Orissa was due to the slow westward movement of the cyclonic disturbance, the centre of which, at 10 A.M. was in the north-west angle of the Bay, and approaching to the North Orissa coast. It crossed the Balasore coast in the afternoon. The disturbance was a small one, but it originated in the same part of the Bay and marched along the same path as the vortex of the fortnight previous. Temperature was rising over the Province. The mean temperature of the past 24 hours was 41° below the mean in Orissa, and 2° in Chutia Nagpur and South Bengal. It was 2° above it in East Bengal. The barometric depression at the head of the Bay continued to be fed by moderate winds of indraught. Winds were south-easterly in East Bengal, variable in North Bengal, easterly in Behar and Chutia Nagpur, and north-easterly to north-westerly in Orissa. The air was unusually dry over a large part of North Bengal and North Behar. The amount of cloud was generally less than on the 6th. Skies were overcast at the majority of stations in Orissa, South-West Bengal, Chutia Nagpur and the Gya district of South Behar.

Rain occurred chiefly in connection with the cyclonic disturbance and was fairly general in Orissa, the south-western districts of South-West Bengal and Chutia Nagpur. A few light showers of no importance fell in East and North Bengal. Tajpore in the Cuttack district received the heaviest amount—3.3 inches.

Sunday, 8th July.—Pressure was increasing rapidly in Orissa and in South-West Bengal. The changes elsewhere were small and unimportant. The cyclonic disturbance was now advancing and near to the North Orissa hills. Temperature was generally slightly lower than on the 7th. Winds were normal in direction. The monsoon winds at the head of the Bay were feeble. Little change took place in humidity. The chief feature was low humidity in Eastern Bengal. The sky was overcast at a few stations, but was generally more than half clouded. General rain, light to moderate in amount, fell in Orissa, Chutia Nagpur and the adjacent districts of South-West Bengal. Light local showers also fell in the eastern districts of South-West Bengal, East Bengal and the northern districts of North Bengal. The rainfall was unusually light over the greater part of North and East Bengal.

Monday, 9th July.—Pressure had increased at the great majority of stations. The rise was rather large in Orissa, but elsewhere the changes were small and of little importance. Pressure was generally below the average by small amounts. Temperature was again rising. The mean temperature was about 1° below the average in Orissa and South Bengal, and 2° below it in Chutia Nagpur and the Gya district. It was slightly above the average in South and Central Behar. The highest maximum temperature was 95.5° recorded at Chupra. Winds were generally normal in character. Light to moderate monsoon winds were blowing at the head of the Bay. The air was much damper in East Bengal and the sky was overcast at the majority of stations in East and North Bengal. It was almost free from cloud in South Behar. Light local showers of little importance fell in every division of the Province: they were slightly heavier and more general in North and East Bengal than elsewhere. A partial break in the rains commenced with the passage of the previous cyclonic vortex across the Orissa hills.

Tuesday, 10th July.—Pressure increased during the preceding 24 hours over the whole province by small amounts, except at Chittagong. A large fall at that station was the first sign of the formation of an area of low pressure off the Aracan coast. Pressure exceeded the normal by small amounts, except in Orissa and at Gya, where it was slightly in defect. Temperature was increasing steadily and was generally above the average by small amounts. The mean temperature of the past 24 hours was 1° above the normal of the day in Behar. The highest maximum temperature of the day was 95.9° at Buxar. Winds were again lighter at the head of the Bay. They were generally unchanged in direction except that westerly winds had set in at Cuttack and False Point. They were probably due to the depression now forming. The sky was overcast at two or three stations in South Behar, and was almost cloudless in South-West Bengal and North Bengal. Light showers fell in every division during the preceding 24 hours. They were fairly general in North and East Bengal. The heaviest reported fall was 4.46 inches at Buxa in the Bhootan Duars. Elsewhere the showers were very light and limited in extent and of little importance. Weather was fine with passing clouds and light local showers except in Behar, where no rain was falling.

Wednesday, 11th July.—Pressure was increasing in Behar, Chutia Nagpur, and at a few stations in South-West Bengal, and was now falling elsewhere. The changes were small except at Chittagong and Akyab, where the barometer was now falling rather rapidly. The area of low pressure and cyclonic air motion off the Aracan coast was more clearly marked than on the 10th and was slowly developing into a feeble disturbance. Pressure was slightly above the average of the day, except in East Bengal and Orissa, where it was in defect. Temperature was increasing rather rapidly, more especially in Behar. The mean temperature of the past 24 hours varied from the normal of the day by amounts averaging $\frac{1}{2}^{\circ}$ in Bengal and $\frac{1}{4}^{\circ}$ in Behar and Chutia Nagpur. The highest temperatures for this day were 98.9° at Buxar, 98° at Patna, and 97.75° at Dehree. Winds were very light at the Head of the Bay and had shifted round to north-east at Balasore and False Point, and to north-west at Gopalpore. Light easterly winds prevailed generally in North Bengal and Behar. The air was drier, more especially in South Behar. The cloud amount was smaller also everywhere and was least in North Bengal and Behar. A few light showers of little import-

ance fell in Orissa, South-West and East Bengal, and in and near the Darjeeling Hills. The break in the rains now extended over the whole province.

Thursday, 12th July.—Pressure gave way over the whole province, most rapidly in Orissa and North and Central Behar. It was at 10 A. M. generally below the normal pressure of the day. The deficiency was greatest at False Point, where it was '09". The cyclonic vortex, which began to form on Tuesday off the Aracan coast, now commenced to move westwards across the Bay towards the Orissa coast. Temperature was above the average except at the coast stations of Orissa and South-West Bengal, and had increased considerably in Behar. The mean temperature of the past 24 hours was 1° above the normal in East Bengal, 2° in South-West Bengal, and 4° in North and Central Behar. High maximum temperatures were recorded for the day in South Behar. Buxar registered a maximum temperature of 101·9° and Patna of 100°. Winds were very light over the whole Province. In South Bengal winds were easterly and on the Orissa coast they were northerly or north-north-westerly. The indraught to the vortex was thus extending, but was as yet very feeble from the north. In North Bengal and Behar light easterly winds prevailed. The extension of the cyclonic disturbance during the past 24 hours gave increased humidity and overcast skies to South-West Bengal and the Orissa coast. In the interior of the province the slight indraught to it continued to diminish the humidity and cloud amount. Rain fell only in connection with the cyclonic disturbance over Orissa, South-West Bengal, and East Bengal, and was generally moderate in amount. The break in the rains continued in Behar, North Bengal and Chutia Nagpur. The cyclonic vortex now gave overcast skies and rain to South Bengal and Orissa.

Friday, 13th July.—Pressure decreased slightly during the preceding 24 hours in Orissa, South-West Bengal, and at the majority of the North Bengal stations, and increased elsewhere. The fall of the barometer in Orissa was due to the westward movement of the feeble cyclonic vortex which was at 10 A. M. approaching the Orissa coast. It crossed the Orissa coast south of False Point and near Gopalpore late in the evening of this day. Pressure varied very slightly from the normal at 10 A. M. except in Orissa, and more especially at False Point where it was '14" below the average for the day. Temperature was above the generally and was unusually high in Behar and North Bengal. Buxar recorded the highest maximum temperature—101·9°. Winds were light to moderate in force at the head of the Bay, and indicated feeble indraught to the vortex off the Orissa coast. North-east winds generally prevailed in Orissa and South-West Bengal at 10 A. M., but shifted round to south-east during the next 24 hours. Winds were light, variable, and unsteady in South Behar. The air was slightly damper in Bengal and Orissa. Skies were overcast or thickly clouded in South Bengal and Orissa. The sky was almost clear at the Behar stations. Rain fell in moderate amounts over South-West Bengal, East Bengal and the greater part of North Bengal. Little or no rain fell in Behar, and the rainfall of North Bengal was very limited. The cyclonic vortex gave slightly unsettled weather with rain to South Bengal and Orissa. In Behar, North Bengal and Chutia Nagpur the break in the rains continued.

Results of the Thermometrical Observations taken at the Meteorological Office,
Chowringhee, from 8th to 14th July 1883.

MONTH	Date.	TEMPERATURE.				HYGROMETRY.				
		Mean.	Maximum.	Range.	Minimum.	Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	Rain.
1883.		°	°	°	°	°	Inches.	°	%	Inches.
July	8th	81.9	89.7	11.4	78.3	79.7	.986	78.8	90	0.82
"	9th	83.2	90.0	12.0	78.0	79.6	.983	78.1	84	0.11
"	10th	84.3	91.3	12.5	78.8	80.8	.985	79.1	84	Nil
"	11th	85.0	92.3	13.4	79.9	81.3	1.006	79.4	81	0.02
"	12th	81.0	89.8	11.1	79.5	79.3	.979	78.6	92	0.58
"	13th	88.6	98.9	9.5	79.4	79.6	.959	78.0	83	Nil
"	14th	81.8	87.7	8.7	79.0	79.3	.969	78.3	89	0.57

The mean temperature of the seven days ... 83.1
 The extreme variation of temperature during the seven days ... 14.3
 The maximum temperature during the seven days ... 92.3

The mean relative humidity during the seven days ... 86

The total fall of rain from 8th to 14th July 1883 ... 1.80

The mean temperature and humidity are obtained by applying to the mean of the 10h, 16h, and minimum readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA

The 16th July 1883.

JOHN ELIOT,

For Meteorological Reporter to the Govt. of India.

MEMORANDA.

THE subjoined table presents the vital statistics of the first class Municipalities in Bengal for the week ending 30th June. The results to be gathered from it, contrasted with those disclosed in the table for the preceding week ending 23rd June, are the following. As this week closes the month, occasion will also be taken to review the results of the whole month.

(1.) The Municipalities which returned the highest birth and death-rates in this week were:—

Births.			Deaths.		
		Ratio per mille.			Ratio per mille.
Gya	..	29.4	Gya	..	70.4
Burdwan	..	29.0	Darjiling	..	59.3
Santipore	..	25.9	Mozufferpore	..	47.4
			Poori	..	38.5
			Durbhanga	..	36.2
			Patna	..	28.9
			Suburbs of Calcutta	..	27.1
			Chuprah	..	25.4
			Kishnaghur	..	25.0

(2.) The mortality from the different death-causes stood as follows as compared with that in the preceding week:—

			Ratio per 1,000 during weeks ending	
			30th June.	23rd June.
Cholera	..	..	3.8	4.5
Small-pox	..	..	.5	.4
Fever	..	..	10.2	11.7
Bowel-complaints	..	..	3.6	4.5
Injury	..	..	.6	.4
Other causes	..	..	6.6	6.9

These figures reveal that, excepting fractional increases in the death-rates from small-pox and violence, all the other diseases proved less fatal this week. Examining the death-rates from the above-mentioned diseases in all the weeks in June, it is seen that the only disease that prevailed, on the whole, with noticeable severity, was cholera, the death-rate from which was never below 4 per 1,000 of population, except during the week under review, when it stood at the still high ratio of 3.8 per 1,000.

Of the above-mentioned diseases cholera, small-pox and fever exhibited the greatest severity during this week in the following Municipalities:—

Cholera.		Small-pox.		Fever.	
	Ratio per mille.		Ratio per mille.		Ratio per mille.
Gya ..	20.5	Gya ...	4.1	Darjiling	44.5
Mozufferpore	12.2			Gya ..	25.3
Durbhanga	6.3			Jessore	24.5
Chuprah	5.9				
Suburbs of Calcutta	4.5				

Bowel-complaints proved greatly fatal in Durbhanga and Chupra, exhibiting a mortality represented by 11.8 and 9.8 persons per 1,000, respectively; and those diseases that are classed under the head of "Other causes" in Gya (15.7 per 1,000), in Poori (12.8 per 1,000), and in the Suburbs of Calcutta (9.7 per 1,000). Adverting again to the figures of all the weeks in June, we find that cholera persistently maintained the highest death-rates during all these weeks in Mozufferpore, Durbhanga, Gya and the Suburbs of Calcutta, in the order mentioned, and in Arrah and Howrah in the first and second weeks; small-pox only in Gya in the first, second and fourth weeks; and fever in Purneah in the first, second and third weeks, and in Darjiling, Gya and Jessore in the fourth week; and that all the other diseases did not exhibit exceptional local severity during the whole of the period under review.

Class or Nationality.—The death-rate among Christians was the highest this week, (3.87 per 1,000 of population); Hindus furnished the next highest rate, viz. 2.66 per 1,000; and Mahomedans the lowest rate, the mortality among them amounting to 2.22 per 1,000.

Referring to *Age*, it is seen that during this week, while infants continued to perish in the highest proportion (223.6 per 1,000 of the living), old men died at the unprecedentedly low ratio of 29.5 per 1,000. The lowest death-rate was returned from among children aged 5 and under 10 years, who usually die in considerably larger numbers.

F. W. A. DEFABECK,

Official Sanitary Commissioner for Bengal.

The 16th July 1883.

Statement showing the results of the registration of Births and Deaths in the First Class Municipalities in Bengal during the week ending 30th June 1883.

[illegible]

[illegible]

F. W. A. DEFABECK,
Offg. Sanitary Commissioner for Bengal.

OFFICE OF SANITARY COMMISSIONER FOR BENGAL,
The 16th July 1893.

PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

Statement shewing the total amount of Traffic and Tolls on the Canals for the month of May 1883.

ORISSA CIRCLE.

Taldundah Canal.

LENGTH OF CANAL OPEN—27½ MILES.

Number of boats.	Nature of cargo.	APPROXIMATE		TONNAGE OF BOATS.		Ton-mileage.	Tollage.	Rate of toll per ton-mile.
		Weight of cargo.	Value of cargo.	Maunds.	Tons.			

LOCAL TRAFFIC.

(1)—PRIVATE.

		Mds.	Rs.				Rs. A. P.	A. P.
Nil.					Nil.			
Total								
Total of same month last year								
MISCELLANEOUS.								
Nil.					Nil.			
Total								
Total of same month last year								

(2)—STORES AND MATERIALS FOR IRRIGATION WORKS.

		Mds.	Rs.				Rs. A. P.	
Nil.					Nil.			
Total								
Total of same month last year								
MISCELLANEOUS.								
Nil.					Nil.			
Total								
Total of same month last year								

ABSTRACT.

	Mds.	Rs.				Rs. A. P.	
Private, including miscellaneous				Nil.			
Government stores, including miscellaneous				Nil.			
Grand Total							
Grand Total of same month last year							

MEMO.

Rs. A. P.

Unrecovered balance on the 1st of the month						83 5 11
Amount of tollage for the month						
Total						83 5 11
Amount credited in the accounts for the month						83 5 11
Balance at the end of the month						

NOTE.—The canal was closed for repairs.